MANUFACTURERS' RECORD

A WEEKLY SOUTHERN INDUSTRIAL RAILROAD AND FINANCIAL NEWSPAPER.

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Baltimore, September 26, 1901.

THE GOSPEL OF ENVY.

[New York Journal of Commerce.]

It is not the anarchists alone who cultivate the demon of envy. There are men who would repudiate the name of anarchists who acquire wealth by playing upon the lowest and basest strings in that instrument of the human heart which often produces the sweetest music imaginable, and sometimes produces the most demoniac discords. The newspaper is not the only means of accomplishing this diabolical purpose, but it is the most effective. There are newspapers whose sole effort seems to be to persuade the free and comfortable American people that they are the victims of somebody. Every man in power they hold up to ridicule and abuse. Every man who is prosperous they make the target of envy. Wealth, instead of being a creation, is described as a robbery. Every shiftless man is tickled with the assurance that his failure in life is not due to his own worthlessness, but to the fact that some successful man has robbed him. These men and papers make it their business, and it is remunerative, as the purveying of vice frequently is, to arouse hatred and envy of every man whose character, whose talents, whose energy and whose good luck, if you will, raise him above the general level of humanity. The anarchist fires at a head simply because it is conspicuous, and he reads papers that teach him to hate every man who is conspicuous. It is quite the natural thing that he should read such papers. It is not the natural thing, it is an utterly incomprehensible fact, that the devout churchman, the educated professional man and the careful merchant should read the same papers and contribute their pennies to the support of a national propaganda of envy, hatred, malice, crime and barbarism.

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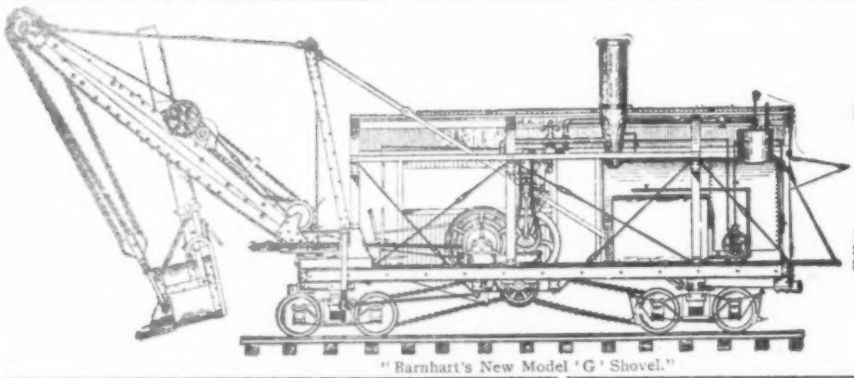

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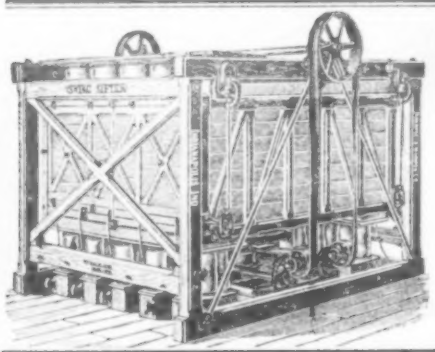

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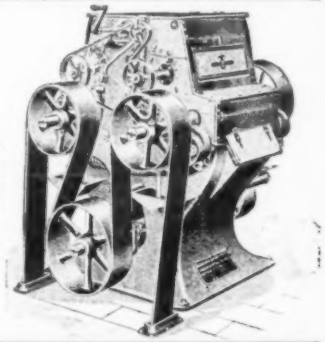

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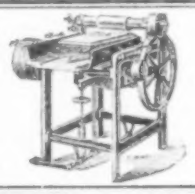

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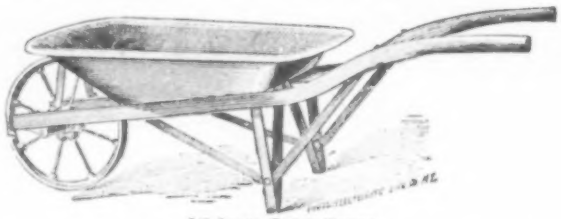

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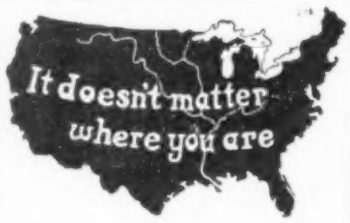

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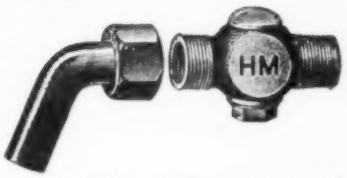

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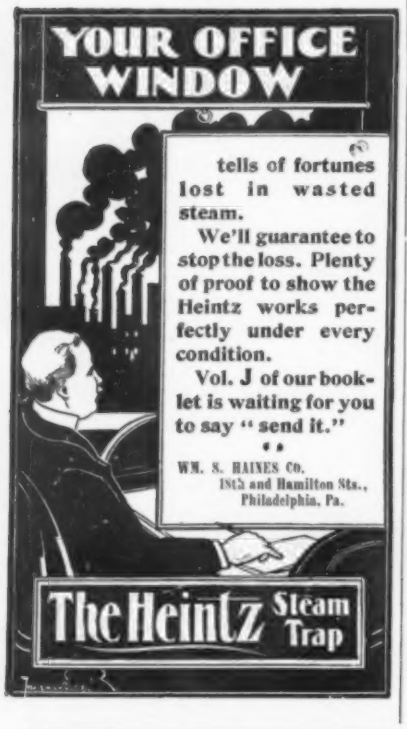

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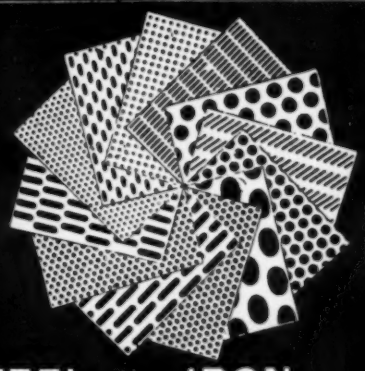

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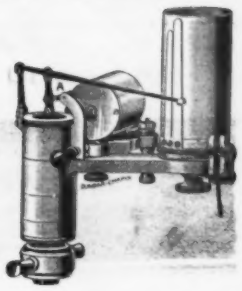

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Speidel, J. G., Reading, Pa.

Drying Machinery.
Alsing Co., Inc., J. R. Brooklyn, N. Y.
American Blower Co., Detroit, Mich.
Bailey-Lesby Co., The, Charleston, S. C.
Crown Dryer Co., Cleveland, O.
Jeffrey Mfg. Co., The, Columbus, O.
Ruggles-Coles Engineering Co., New York, N. Y.
Sturtevant Co., B. F., Boston, Mass.
West Pulverizing Machine Co., New York, N. Y

Dust-Collecting System.
Allington & Curtis Mfg. Co., Saginaw, E. S. Mic
Sterling Blower & Pipe Mfg. Co., Hartford, Conn.

Dyeing Machinery.
Fairmount Machine Co., Philadelphia, Pa.
Klauder-Weldon Co., Amsterdam, N. Y.

Dynamos and Motors.
Alexander, Jr., Co., S. B., Charlotte, N. C.
Commercial Electric Co., Indianapolis, Ind.
Crocker-Wheeler Co., Ampere, N. J.
General Electric Co., Schenectady, N. Y.
Gregory Electric Co., Chicago, Ill.
Guarantee Electric Co., Chicago, Ill.
Kentucky Electrical Co., Owensboro, Ky.
McCay Engineering Co., Baltimore, Md.
New Jersey Foundry & Machine Co., Plainfield, N. J.
Northern Electrical Mfg. Co., Madison, Wis.
Ridgway Dynamo & Engine Co., Ridgway, Pa.
Smethurst & Allen, Philadelphia, Pa.
Smith, Samuel J., & Co., Charlotte, N. C.
Sprague Electric Co., New York, N. Y.
Stanley Electric Mfg. Co., Pittsfield, Mass.
Tower Binford Elec. & Mfg. Co., Richmond, Va
Triumph Electric Co., Cincinnati, O.
Westinghouse Elec. & Mfg. Co., Pittsburg, Pa.

Electric Contractors.
Alexander, Jr., S. B., Co., Charlotte, N. C.
Jenks, W. H., Richmond, Va.
Northern Elec. Mfg. Co., Madison, Wis.
Stanley Elec. Mfg. Co., Pittsfield, Mass.
Tower-Binford Elec. & Mfg. Co., Richmond, Va.

Electrical Instruments.
Bunnell, J. H., & Co., New York, N. Y.
Northern Electric Supply Co., Madison, Wis.
Stanley Electric Mfg. Co., Pittsfield, Mass.

Electric-Light and Power Plants.
Alexander, Jr., Co., S. B., Charlotte, N. C.
Commercial Electric Co., Indianapolis, Ind.
Crocker-Wheeler Co., Ampere, N. J.
General Electric Co., Schenectady, N. Y.
General Incandescent Arc Light Co., New York.
Gregory Electric Co., Chicago, Ill.
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Northern Electrical Mfg. Co., Madison, Wis.
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Smethurst & Allen, Philadelphia, Pa.
Sprague Electric Co., New York, N. Y.
Stanley Electric Mfg. Co., Pittsfield, Mass.
Tower-Binford Elec. & Mfg Co., Richmond, Va.
Triumph Electric Co., Cincinnati, O.
Westinghouse Elec. & Mfg. Co., Pittsburg, Pa.

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Northern Electrical Mfg. Co., Madison, Wis.
Sprague Electric Co., New York, N. Y.
Stanley Electric Mfg. Co., Pittsfield, Mass.
Triumph Electric Co., Cincinnati, O.
Westinghouse Elec. & Mfg. Co., Pittsburg, Pa.
Western Electrical Supply Co., St. Louis, Mo.

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Guarantee Electric Co., Chicago, Ill.
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Smith, Samuel J., & Co., Charlotte, N. C.
Tower-Binford Elec. & Mfg. Co., Richmond, Va.

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Gregory Electric Co., Chicago, Ill.
Guarantee Electric Co., Chicago, Ill.
Jenks, W. H., Richmond, Va.
Johns Mfg. Co., H. W., New York, N. Y.
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McCay Engineering Co., Baltimore, Md.
Northern Electrical Mfg. Co., Madison, Wis
Smith, Samuel J., & Co., Charlotte, N. C.
Stanley Electric Mfg. Co., Pittsfield, Mass.
Sturtevant Co., B. F., Boston, Mass.
Tower-Binford Elec. & Mfg. Co., Richmond, Va.
Triumph Electric Co., Cincinnati, O.
Western Electrical Supply Co., St. Louis, Mo.
Westinghouse Elec. & Mfg. Co., Pittsburg, Pa

Electric Locomotives. (See Locomo. Bldrs.)

Electric Trucks.
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Electrotypers.
American Type Founders Co., Baltimore, Md.
Spencer & Hall, Baltimore, Md.

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Aultman Co., The, Canton, O.
Bartlett, Hayward & Co., Baltimore, Md.
Bates', James, Sons, Baltimore, Md.
Craig Ridgway Co., Coatesville, Pa.
Curran, Jas. H., Elevator Co., Cincinnati O.
Eaton & Prince Co., Chicago, Ill.
Fairmount Machine Co., Philadelphia, Pa.
Faunt Le Roy & Co., Baltimore, Md.
Link-Belt Engineering Co., Philadelphia, Pa
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Park Mfg. Co., Charlotte, N. C.
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Union Elevator & Machine Co., Chicago, Ill.
Westbrooks, J. B., Fdry. & Mch. Co., Danville, Va.

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Caldwell, H. W., & Son Co., Chicago, Ill.
Clark Co., The W. J., Salem, O.
Dodge Mfg. Co., Mishawaka, Ind.
Jeffrey Mfg. Co., Columbus, O.
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Tate, Jones & Co., Pittsburg, Pa.

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Dow Wire Work Co., Louisville, Ky.
Dufur & Co., Baltimore, Md.
Ludlow-Saylor Wire Co., The, St. Louis, Mo.
Myers Mfg. Co., The Fred J., Hamilton, O.

Elevator Rope. [See Wire Rope.]

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Carborundum Co., The, Niagara Falls, N. Y.
Scranton Corundum & Emery Wheel Co., Scranton, Pa.
Tanite Co., The, Stroudsburg, Pa.

Emery Wheels. [See Grinding and Polishing Machinery.]

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Adams, Henry, Baltimore, Md.
American Bridge Co., New York, N. Y
Blanton, Jr., E. A., Philadelphia, Pa.
Collier & Brown, Atlanta, Ga.
Erikson, Edw. E., Pittsburg, Pa.
Given, Wm. M., Birmingham, Ala.
Hall, Charles A., M. E., Mobile, Ala.
Hutton Engineering Co., Lexington, Va.
Kennedy, Walter, Pittsburg, Pa.
Lederle, Frank, Atlanta, Ga.
McRae, M. W., Atlanta, Ga.
Morrison & Kindervater, Richmond, Va.
Nicol, Baur & Foster, Mobile, Ala.
Northern Elec. Mfg. Co., Madison, Wis.
Ferry, Nathaniel V., Atlanta, Ga.
Pratt & Boltwood, Chapel Hill, N. C.
Pratt Laboratory, N. P., Atlanta, Ga.
Risdon-Alcott Turbine Co., Mount Holly, N. J.
Robinson Contracting Co., Geo. A., Mobile, Ala.
Stanley Elec. Mfg. Co., Pittsfield, Mass.
Thorburn Reid, New York, N. Y.
Tower-Binford Elec. & Mfg. Co., Richmond, Va.
Virginia Bridge & Iron Co., Roanoke, Va.
Witherow, Jas. P., Pittsburg, Pa.

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American Blower Co., Detroit, Mich.
Atlas Engine Works, Indianapolis, Ind.
Ball Engine Co., The, Erie, Pa.
Ball & Wood Co., New York, N. Y.
Boston Blower Co., Hyde Park, Mass.
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Cameron & Barkley Co., Charleston, S. C.
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Frick Co., Waynesboro, Pa.
Gibbes, W. H., & Co., Columbia, S. C.
Greenwald Co., I. & E., Cincinnati, O.
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Mecklenburg Iron Works, Charlotte, N. C.
Minnigerode, Wm., Lynchburg, Va.
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Phillips, Edward W., Baltimore, Md.
Phoenix Iron Works Co., Meadville, Pa.
Remington Machine Co., Wilmington, Del.
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Salem Iron Works, Winston-Salem, N. C.
Schofields, J. S., Sons Co., Macon, Ga.
Smith-Courtney Co., Richmond, Va.
Southern Eng. & Boiler Works, Jackson, Tenn.
Southwark Foundry & Machine Co., Philadelphia, Pa.
St. Louis Iron & Machine Works, St. Louis, Mo.
Struthers, Wells & Co., Warren, Pa
Sturtevant Co., B. F., Boston, Mass.
Union Iron Works Co., Selma, Ala.
Valk & Murdoch Iron Works, Charleston, S. C.
Valley Iron Works, Williamsport, Pa.
Villter Mfg. Co., Milwaukee, Wis.
Wetherill, Robert, & Co., Chester, Pa
Westinghouse Machine Co., Pittsburg, Pa.
York Mfg. Co., York, Pa.

Engines. (Gas and Gasoline.)
Blakeslee Mfg. Co., The, Birmingham, Ala.
Columbus Machine Co., Columbus, O.
Cornell Machine Co., Chicago, Ill.
Fairbanks Co., Baltimore, Md.
Olds Motor Works, Detroit, Mich.
Otto Gas Engine Works, Philadelphia, Pa.
Struthers, Wells & Co., Warren, Pa.
Westinghouse Machine Co., Pittsburg, Pa

Engines. (Gas and Kerosene.)
Mietz, A., New York, N. Y.

Engines. (Oil.)
Aultman Co., The, Canton, O.

Engravers.
Alpha-Photo Engraver Co., Baltimore, Md.
Baltimore Engraving Co., Baltimore, Md.

Exhaust Heads.
Bonar James, & Co., Pittsburg, Pa.
Burt Mfg. Co., Akron, O.
Sterling Blower & Pipe Mfg. Co., Hartford, Conn.

Exhausters.
Cornell, J. B. & J. M., New York, N. Y.

Expansion Bolts.
New Jersey Foundry & Machine Co., Plainfield, N. J.

Fans. (Electric Ceiling, etc.)
Paragon Fan & Motor Co., New York, N. Y.

Fans. (Ventilating.) [See Blowers, Exhaust Fans.]

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Berryman, Jas., Philadelphia, Pa.
Bonar, James, & Co., Pittsburg, Pa.
Gem City Boiler Co., Dayton, O.
Green Fuel Economizer Co., Matteawan, N. Y.
Harrison Safety Boiler Works, Philadelphia, Pa.
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Park Mfg. Co., Charlotte, N. C.
Patterson, Frank L., New York, N. Y.
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Phoenix Iron Works Co., Meadville, Pa.
Scaife, Wm. B., & Sons, Pittsburg, Pa.
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Taunton Locomotive Mfg. Co., The, Taunton, Mass.
Warren Webster Co., Camden, N. J.

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Baeder, Adamson & Co., Philadelphia, Pa.

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Balderston, H., & Son, Baltimore, Md.
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Burger Iron & Wire Works Co., Akron, O.
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Dow Wire Works Co., Louisville, Ky.
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Eureka Supply Co., Chattanooga, Tenn.
Ludlow-Saylor Wire Co., St. Louis, Mo.
New Jersey Wire Cloth Co., Trenton, N. J.

Fertilizer Machinery. (See Phosphate Mchy.)

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Barnett Co., G. & H., Philadelphia, Pa.
Besly, Chas. H., & Co., Chicago, Ill.
Nicholson File Work, Providence, R. I.

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Hammond Iron Works, Warren, Pa.
Industrial Water Co., New York, N. Y.
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N. Y. Continental Jewell Filtration Co., New York, N. Y.
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Flower, Walter L., & Co., St. Louis, Mo.
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Johnson, J. & Co., New York, N. Y.
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Carolina Fire-Brick Works, Killian, S. C.
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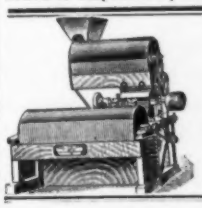
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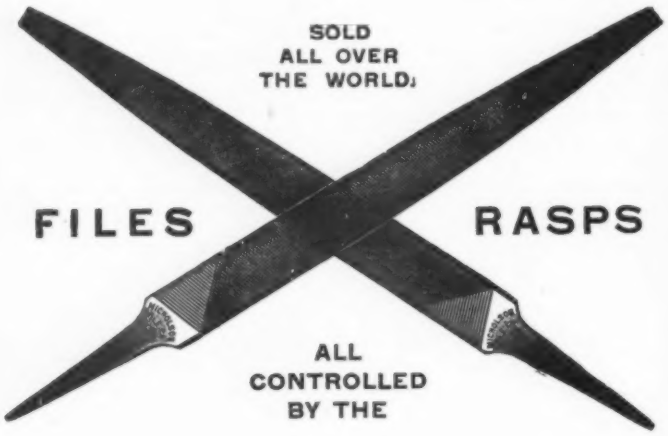

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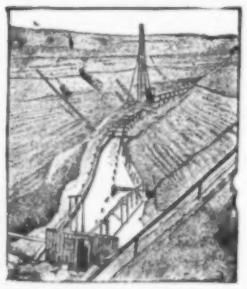

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Classified Index of Advertisers.

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Fire Extinguishers.
Bailey-Lebby Co., The, Charleston, S. C.
Childs Co. O. J., Utica, N. Y.
General Fire Extinguisher Co., Providence, R. I.
International Sprinkler Co., Philadelphia, Pa.

Fire Escapes.
Bolles Iron & Wire Works, J. E., Detroit, Mich.
Dow Wire Works Co., Louisville, Ky.

Flooring. (Polished Hardwood.)
Adams, J. M., Baltimore, Md.
Wilce Co., The T., Chicago, Ill.

Flour and Grist Mill Machinery and Supplies.
Alsing Co., Inc., J. R., Brooklyn, N. Y.
Caldwell, H. W., & Son Co., Chicago, Ill.
Dehner-Wuerpel Mill Bldg. Co., St. Louis, Mo.
DeLoach Mill Mfg. Co., Atlanta, Ga.
Nordyke & Marmon Co., Indianapolis, Ind.
Salem Machine Works, Salem, Va.
Sprout, Waldron & Co., Muncy, Pa.
Starr, B. F., & Co., Baltimore, Md.
Wolf Co., Chambersburg, Pa.

Forges.
Boston Blower Co., Hyde Park, Mass.
Buffalo Forge Co., Buffalo, N. Y.
Sturtevant Co., B. F., Boston, Mass.

Foundry Equipment and Supplies.
Etting, Edw. J., Philadelphia, Pa.
Hill & Griffith Co., Cincinnati, O.
Obermayer Co., S., Cincinnati, O.

Foundry Ladles. [See Foundry Equipment

Fruit Evaporators.
Wilson, H. McK., & Co., St. Louis, Mo.

Fuel Economizer.
Broomell, Schmidt & Co., Ltd., York, Pa.
Green Fuel Economizer Co., Matteawan, N. Y.

Fuel Oil Equipment and Machinery.
Petroleum Iron Works Co., Washington, Pa.
Rockwell Engineering Co., New York.

Furnace Builders.
Erikson, Edw. E., Pittsburg, Pa.
Kennedy, Walter, Pittsburg, Pa.
Means & Fulton Iron Works, Birmingham, Ala.
Witherow, Jas. P., Pittsburg, Pa.

Furnace Heating. (Stoves.)
Richmond Stove Co., Norwich, Conn.

Furnaces. (Metallurgical.)
Rockwell Engineering Co., New York, N. Y.

Furnaces. (Gas Soldering.)
Jacobson Mch. Mfg. Co., Warren, Pa.

Fuse. (Wire Blocks, Fuses, etc.)
American Electric Fuse Co., Adrian, Mich.

Gages (Recording) and Counters.
American Steam Gauge Co., Boston, Mass.
Crosby Steam Gauge & Valve Co., Boston, Mass.

Galvanized Sheets.
American Sheet Steel Co., New York, N. Y.

Gas Regulator.
Jacobson Machine Manufacturing Co., Warren, Pa.

Gas Producers.
Erikson, Edward E., Pittsburg, Pa.
Smythe Co., The S. R., Pittsburg, Pa.
Wood, R. D., & Co., Philadelphia, Pa.

Gas and Steam Fitters' Tools.
Saunders' Sons, D., Yonkers, N. Y.

Gaskets. (Rubber.)
Boston Belting Co., Boston, Mass.

Gear Cutting Machines.
Whiton Machine Co., D. E., New London, Conn.

Gears and Pinions. (Raw Hide.)
New Process Rawhide Co., Syracuse, N. Y.

Gearing.
Chester Steel Castings Co., Philadelphia, Pa.
Fairmount Machine Co., Philadelphia, Pa.
Jeffrey Mfg. Co., The, Columbus, O.
Link-Belt Engineering Co., Philadelphia, Pa.
Morse, Williams & Co., Philadelphia, Pa.
New Process Rawhide Co., Syracuse, N. Y.
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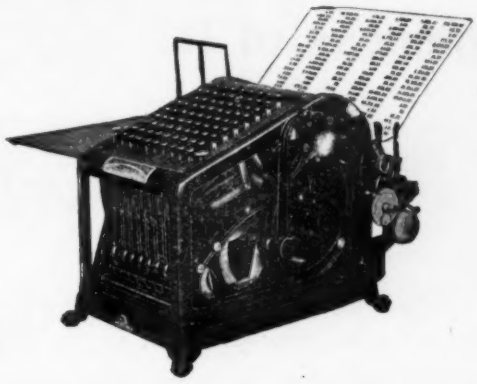

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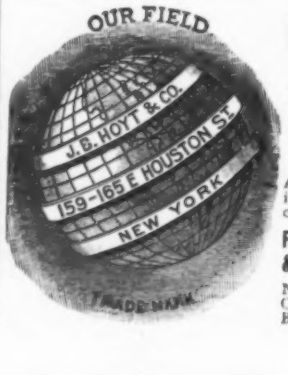

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Detroit Graphite Mfg. Co., Detroit, Mich.
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Garfield Oil Co., Cleveland, O.
Johns Mfg. Co., H. W., New York, N. Y.
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Walker & Elliott, Wilmington, Del.
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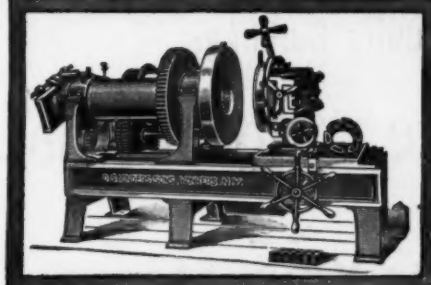

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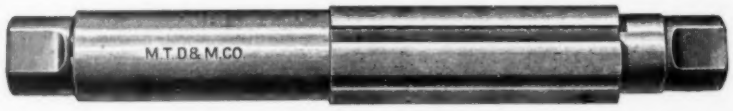

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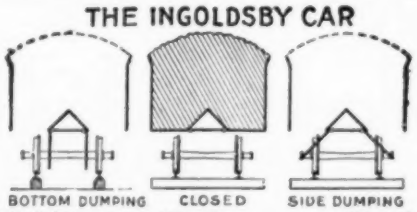

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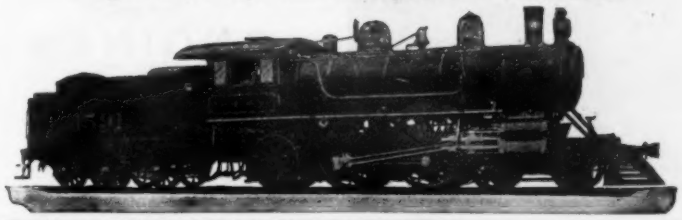

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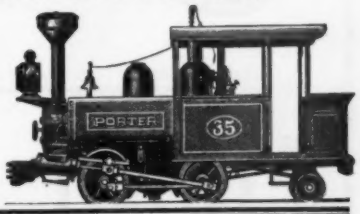

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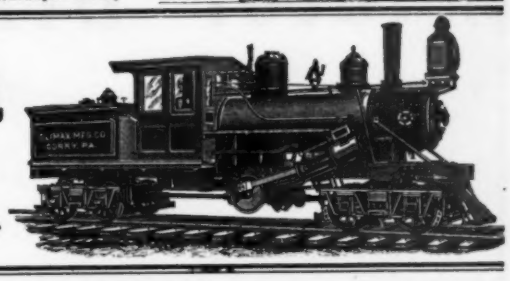

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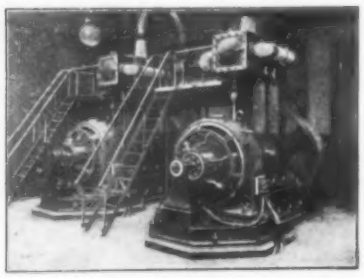

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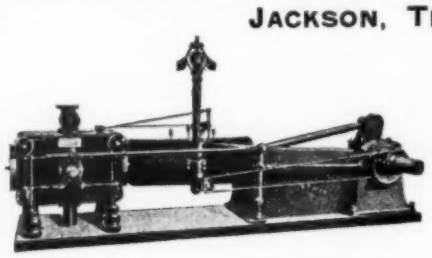

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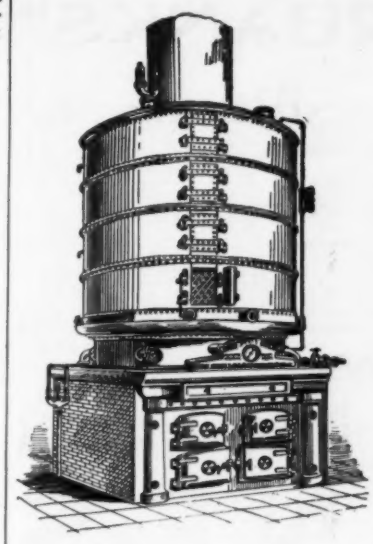

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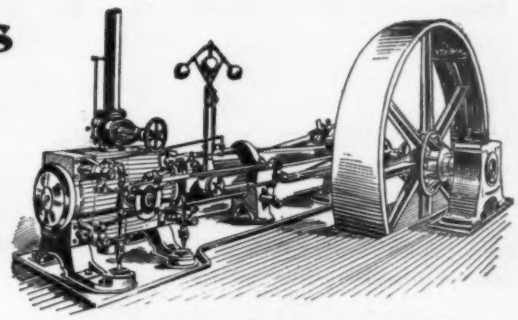

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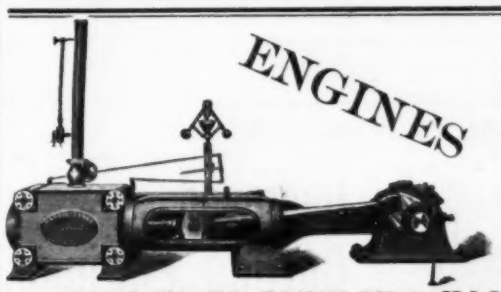

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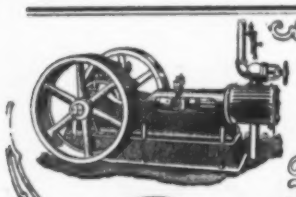

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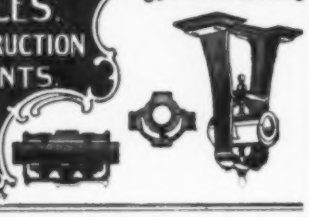

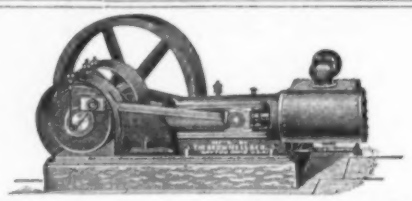

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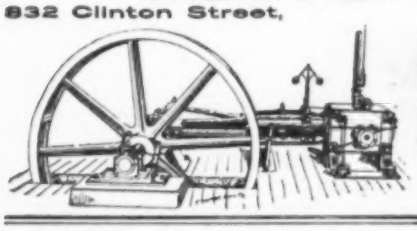

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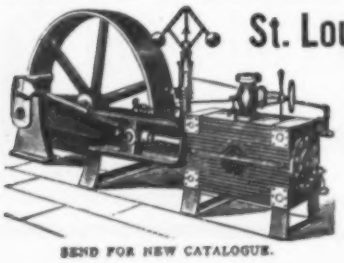

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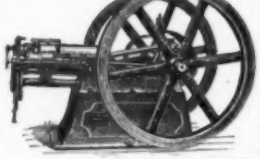

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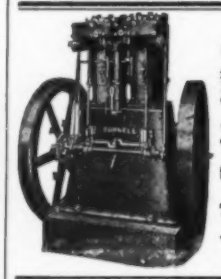

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THE MIETZ & WEISS

Kerosene and Gas Engine.

Cheapest power known.

Burns Kerosene. Self-igniting. Simplest engine built. Automatic, simple and reliable. For all power purposes including pumping and electric lighting. Send for Cat'g.

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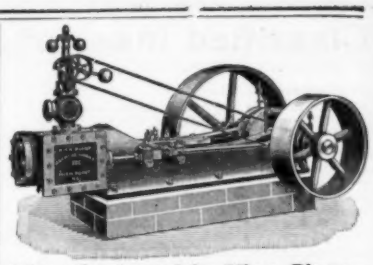

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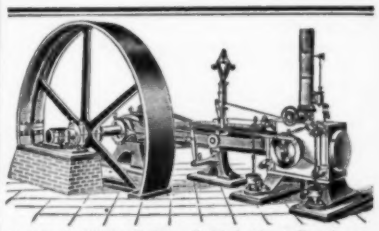

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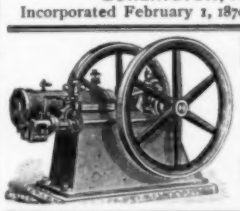

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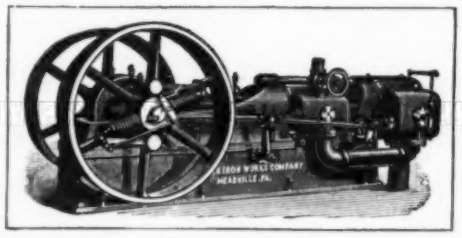

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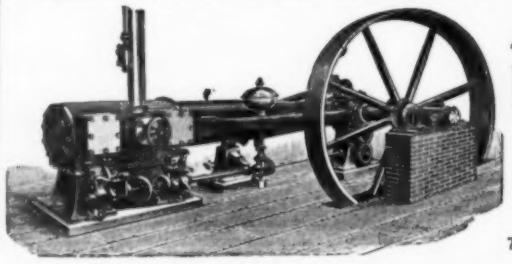

Steam Engines,

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For Alphabetical Index See Page 29.

Weighing Machine. (Automatic.)
N. E. Automatic Weighing Machine Co., Boston, Mass.

Well Contractors. (Oil, Artesian, etc.)
Andrews, Perry, & Bro., Atlanta Ga.
Austin Mfg. Co., F. C., Harvey, Ill.
Bacon Air Lift Co., New York, N. Y.
Cook Well Co., St. Louis, Mo.
Gould, F. M., Richmond, Va.
Hughes Specialty Well Drilling Co., Charleston, S. C.
Sydnor Pump & Well Co., Inc., Richmond, Va

Well Drillers. [See Well Tools and Supplies.]

Well Tools and Supplies. (Artesian.)
Austin Mfg. Co., F. C.. Harvey, Ill.
Bacon Air Lift Co., New York, N. Y
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Gould, F. M., Richmond, Va.
Hughes Specialty Well Drilling Co., Charleston, S. C.
Loomis & Nyman, Tiffin, O.
Perry Andrews & Co., Atlanta, Ga.
Sydnor Pump & Well Co., Inc., Richmond, Va.
Williams Bros., Ithaca, N. Y.

Wheelbarrows and Trucks.
Jackson Mfg. Co., Harrisburg, Pa.
Kilbourne & Jacobs Mfg. Co., Columbus, O.

Whistles. (Chimes, Sirens, etc.)
American Steam Gauge Co., Jamaica Plain, Mass.
Crosby Steam Gauge & Valve Co., Boston, Mass.
Lunkenheimer Co., Cincinnati, O.

White Lead.
French, Samuel H., & Co., Philadelphia, Pa.

Windlasses.
American Ship Windlass Co., Providence, R. I.

Windmills.
Flint & Walling Mfg. Co., Kendallville, Ind.

Window Guards. (Wire.) [See Wire Goods.]

Window Frames & Sashes. (Metallic.)
Badger, E. B., & Sons, Boston, Mass.
Smith-Warren Co., East Cambridge, Mass.

Wire Cloth. (Iron, Steel, Brass, etc.)
Burger Iron & Wire Works Co., Akron, O.
Caldwell, H. W., & Sons, Chicago, Ill.
Meyers, Fred. J., Mfg. Co., Hamilton, O.
New Jersey Wire Cloth Co., Trenton, N. J.

Wire Goods.
Balderston, H., & Son, Baltimore, Md.
Bolles Iron & Wire Works, J. E., Detroit, Mich.
Burger Iron & Wire Works Co., Akron, O.
Dow Wire Works Co., Louisville, Ky.
Dufur & Co., Baltimore, Md.
Ludlow-Saylor Wire Co., The, St. Louis, Mo.
Meyers Mfg. Co., The Fred J., Hamilton, O.
New Jersey Wire Cloth Co., Trenton, N. J.

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Chandlee Fence Co., Baltimore, Md.
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Lidgerwood Mfg. Co., New York, N. Y.
Macomer & Whyte Rope Co., Chicago, Ill.
Roebling's, John A., Sons Co., Trenton, N. J.
Trenton Iron Co., Trenton, N. J.

Wire-Rope Tramways. [See Tramways.] (Wire Rope.]

Wrenches. (Drop Forged.)
Atlas Pipe Wrench Co., New York, N. Y.
Williams, J. H., & Co., Brooklyn, N. Y.

Woodsplitting Machines.
Trevor Mfg. Co., Lockport, N. Y.

Woodworking Machinery.
Chattanooga Machinery Co., Chattanooga, Tenn.
Chicago Knife Works, Chicago, Ill.
Coe Mfg. Co., The, Painesville, O.
Cordesman Meyer & Co., Cincinnati, O.
DeLoach Mill Mfg. Co., Atlanta, Ga.
DuBois Iron Works, DuBois, Pa.
Egan Co., The, Cincinnati, O.
Fay, J. A., & Co., Cincinnati, O.
Frank Machinery Co., The, Buffalo, N. Y.
Gibbes, W. H., & Co., Columbia, S. C.
Greaves, Klusman & Co., Cincinnati, O.
Huther Bros, Rochester, N. Y.
Lane Mfg. Co., Montpelier, Vt.
Root, B. M., York, Pa.
Salem Iron Works, Winston-Salem, N. C.
Shimer, Samuel J., & Sons, Mineral, Va.
Smith Machine Co., H. B., Smithville, N. J.
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Merchant & Co., Inc., Philadelphia, Pa.
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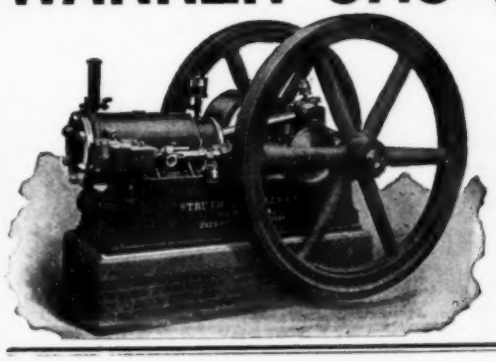

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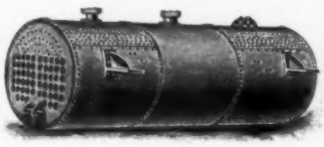

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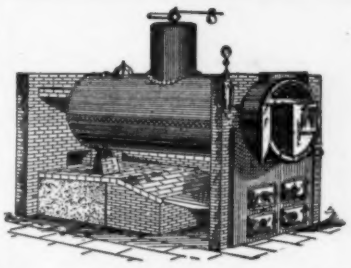

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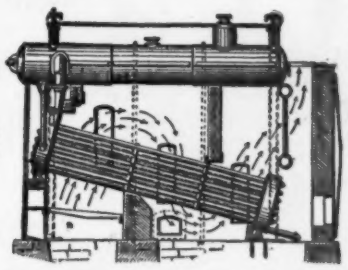
Water-Tube Boiler,



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COMPLETE STEAM PLANTS.

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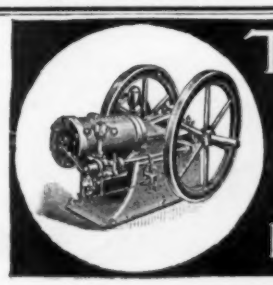

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LET US TELL YOU WHY
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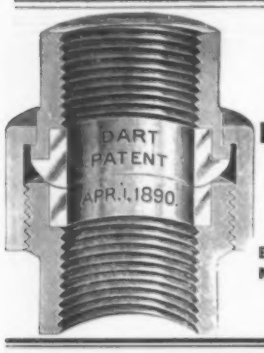

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Now our earliest customers like to write and tell about the good service our boilers are still giving after 18 to 20 years' of use.

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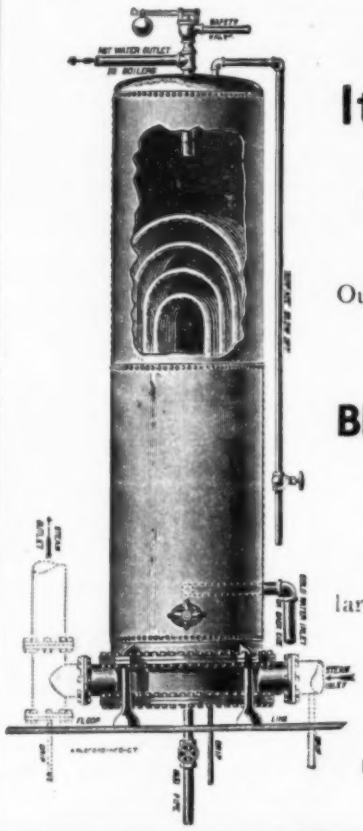

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It Never Leaks.

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Safe, Economical, Durable,

Water Tube Boilers.

SHOPS AT
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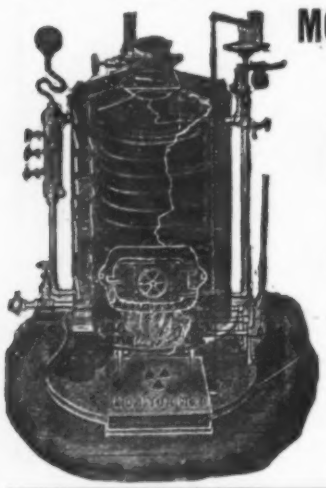

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With Rivet Holes Drilled after Plates are Bent and in Position, Tanks and Sheet Iron Works, Engines, Cotton Gins and Presses. Machinery for Fertilizer Works and Phosphate Washers, Asbestos Magnesia Pipe Covering and Magnesia Cement Felting for Boilers, Domes, Steam Piping, etc.

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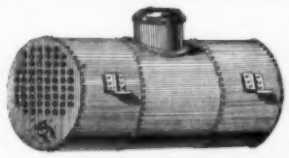

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Solid, Liquid and Powdered Boiler Compound,

Prevents Corrosions and Incrustations, Removes Scale, Preserves the Iron, Increases Capacity of Boiler and saves 15 to 60 per cent in Fuel.

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Heating, Ventilating and ...Sanitary Engineers.

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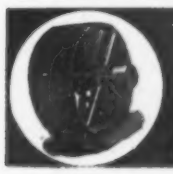

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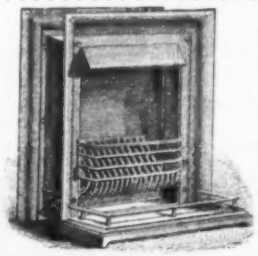

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What you save in the construction of the chimney more than pays for the grate and **saves half the fuel forever.**

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Dealers, architects and builders wanted for agents in every city and town. Most liberal terms given and **freight prepaid** to any point east of the Rocky Mountains. Ask for illustrated booklet, free, with full information. Address **BURNAM GRATE CO., Fayetteville, Tenn.**

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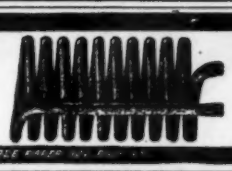

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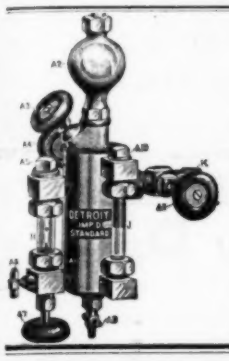
SIEGRIST AUTOMATIC OILING SYSTEM

(PATENTED)

Have closed Contracts since January, 1900, to July 1st, to equip 37 Plants. We have never failed to receive order to equip all new units installed. We are saving one Company $450.00 a month, the others in proportion. We will refund all money paid if apparatus does not operate successfully. You cannot ask more, so if you will investigate, we will receive your order.

Address Makers. SIEGRIST LUBRICATOR COMPANY, ST. LOUIS, U. S. A.



THE DETROIT SIGHT FEED LUBRICATORS

possess all the improvements and good features that have been suggested by our own and our customers' experience during the past 20 years.

They are being used by more than nine-tenths of the prominent American engine builders, who are good judges of lubricators. Many of these have used them continuously for more than 15 years.

There are more than 550,000 Detroit Sight Feed Lubricators in use, or more than all other styles combined.

Use the Detroit Lubricators and you will be in good company. Our New Catalogue, showing our full line, will be sent on application.

GLASS BODY OIL PUMPS.

DETROIT LUBRICATOR CO., DETROIT, MICH.

Of Interest to Steam Plant Managers and Designers.

We have made a specialty of designing, constructing and installing appliances for converting exhaust steam into a money-maker and a saver of labor.

The installation of hundreds of thousands of horse power of **Cochrane Feed-Water Heaters,** and of thousands of **Cochrane Oil Separators and Cochrane Steam Separators** in steam plants for electric stations, textile mills, office buildings, industrial and manufacturing plants, has given us the opportunity of making a study of the most efficient methods for heating and purifying boiler feed-water, utilizing the condensation of steam used in heating systems and for various manufacturing purposes, etc.

If any steam plant manager or designer cares to write us stating the conditions that prevail, or will exist in his plant, we will be glad to inform him of what we have done with our **Cochrane Heaters** and our **Cochrane Separators** in plants operating under similar conditions.

Our catalogues contain, we believe, some useful information.

Harrison Safety Boiler Works,
Allegheny Ave. and 17th St.
PHILADELPHIA, PA.

BOILERS

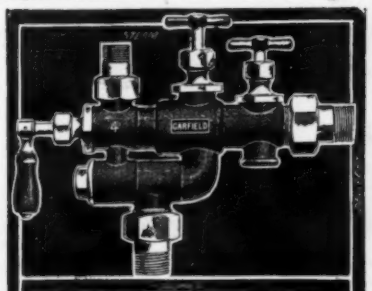
and COMPLETE POWER PLANTS, STACKS, EXHAUST STEAM HEATING, etc

E. KEELER CO., Williamsport, Pa.
Send for Catalog.

BOILERS AND ENGINES.

Tanks, Stacks, Stand Pipes and Sheet Iron Work; Shafting, Pulleys, Gearing, Boxes, Hangers, etc. Mill Castings.
Cast every day; work 180 hands.

Lombard Iron Works & Supply Co.
AUGUSTA, GEORGIA.



The Garfield Double Jet INJECTOR.

A Stationary Boiler Injector that is in a class by itself. It's perfect.

Send for complete Injector Catalog.

The Ohio Injector Co.
Wadsworth, Ohio.

The Austin Separators

are the perfect separator. They do exactly what they're meant to do--eliminate all condensation from live steam—all oil, grease and other impurities from exhaust. Not part of the time, but all the time.

We ship to responsible parties on 30 days' trial. Send it back if not satisfied.

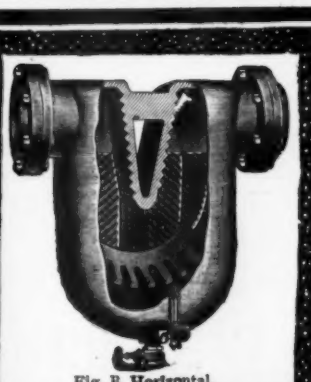


Fig. B, Horizontal.

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STEAM BOILER Inspection and Insurance.

Boilers do explode and cause damage to property and sometimes destroy life or cause personal injury.

Inspections carefully made tend to prevent explosion, and insurance provides indemnity against loss by explosion.

MARYLAND CASUALTY COMPANY.
Home Office, BALTIMORE,

furnishes the best inspection service that good salaries and careful selection of men can provide. Adjusts and pays losses immediately.

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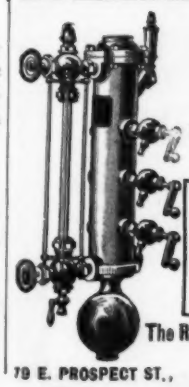

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Save Fuel, Repairs, Stoppages. ECONOMY. SAFETY.

We urge our patrons to see that the name "Reliance" is cast on all columns. No other person or corporation is authorized to manufacture Reliance Steam Specialties.

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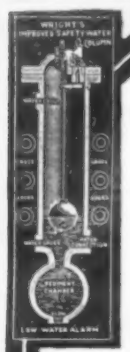

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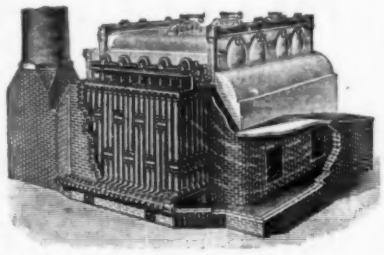

lessens such cost not only of the extent of **10 to 20 per cent.** on fuel bill, but in increased boiler capacity, decreased boiler repairs—increased heat of feed-water—besides heating of mills, factories, etc., without additional fuel. Our free descriptive booklet, "Green's Economizer," explains our methods.

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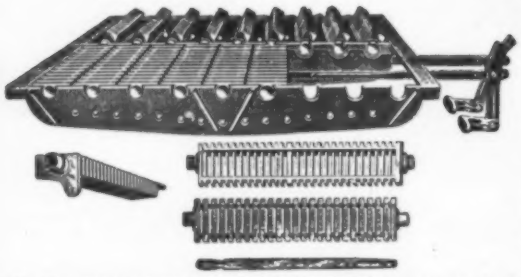

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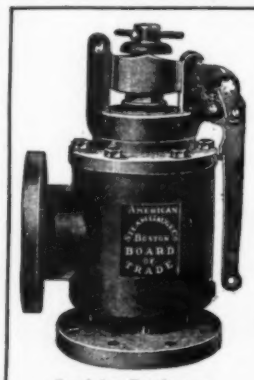

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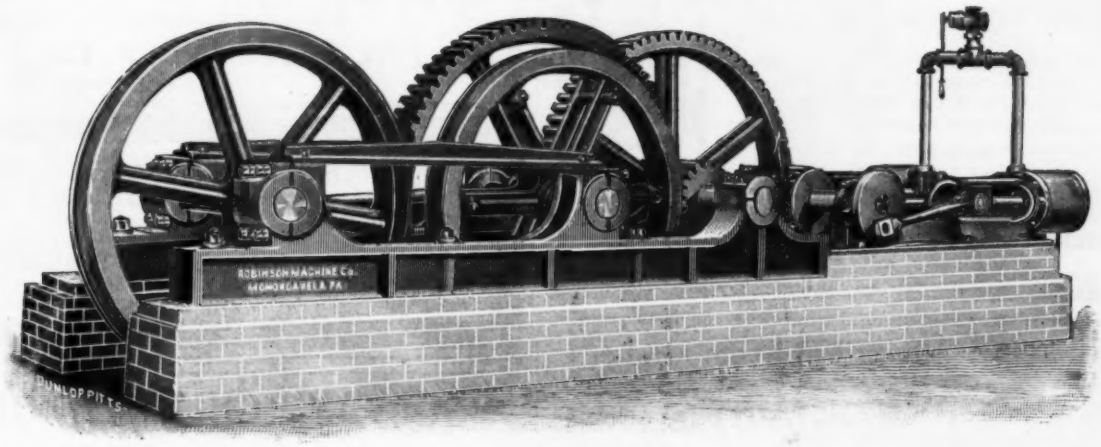

Built with especial regard to the severe duty required of haulage machinery. It consists of a pair of small engines, geared with compound gearing into two grooved drums, the object of the compound gearing being two fold. 1st, to slow the rope to its proper running speed; 2nd, to secure greater power from a small pair of engines. All shafts run in Babbitt metal boxes, which are part of the frame castings which support the entire machine. The advantages of this system of haulage are:

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3rd. Slow rate of speed of the cars, which reduces the cost of repairs for same.

4th. Rapidity of handling cars. The full train of cars is attached to the rope at the inside parting, proceeding to the tipple without delay. The empty train is attached at the tipple and returns to the inside parting for distribution in the mine.

The tipple crew detach the cars, dump and attach to the return line, thus having a constant train of cars on the line at all times.

5th. Avoidance of all possibility of wrecks on the road.

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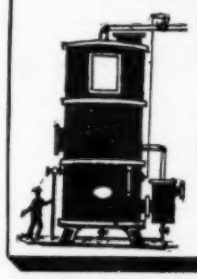

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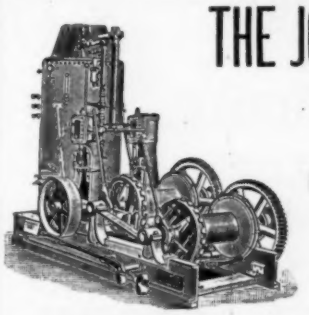

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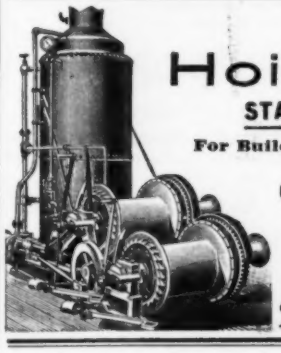

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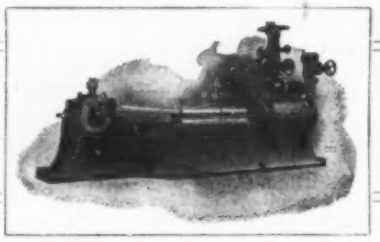

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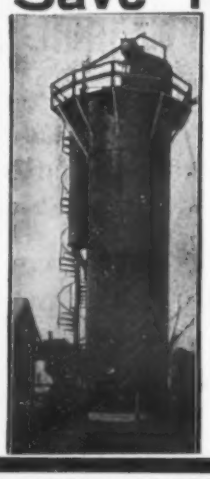

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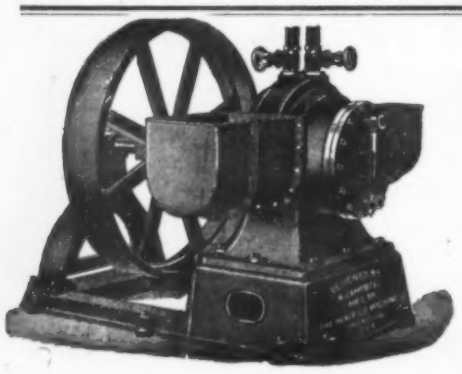

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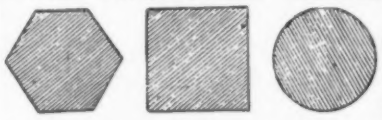

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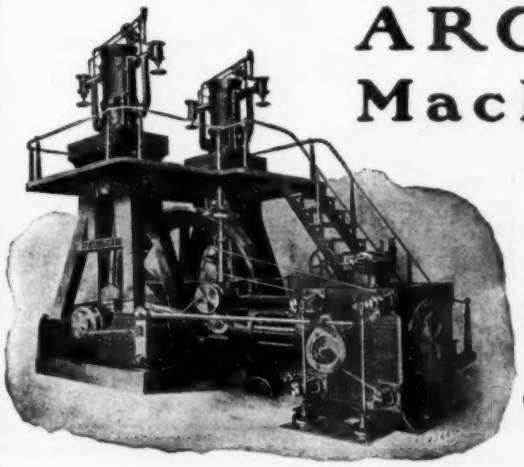

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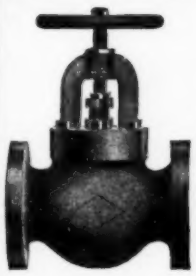

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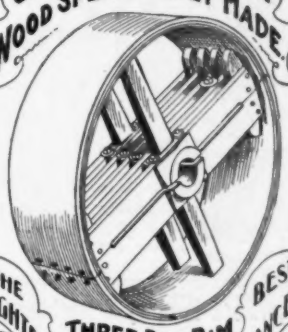

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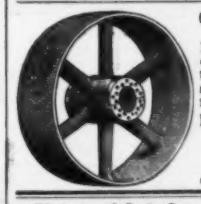

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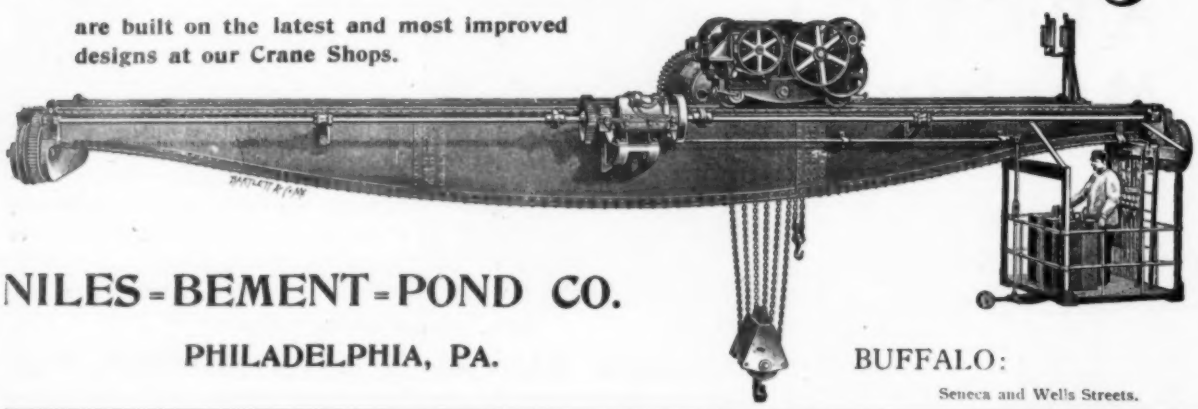

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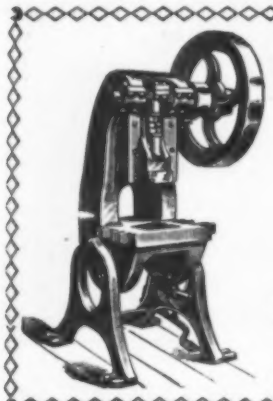

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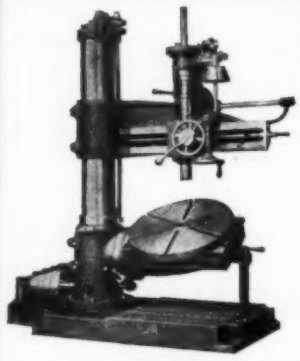

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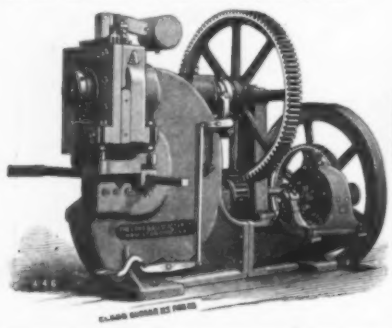

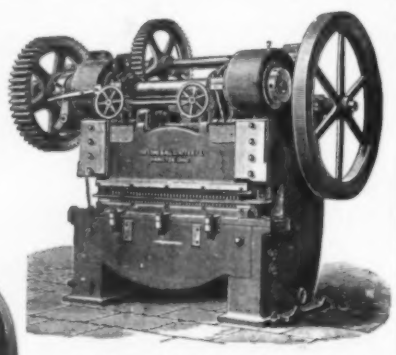

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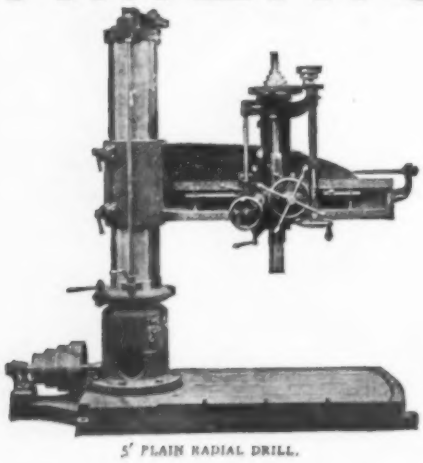

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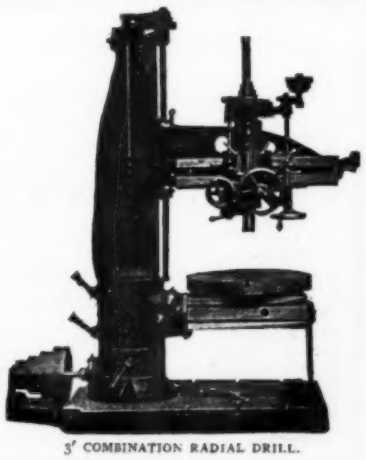

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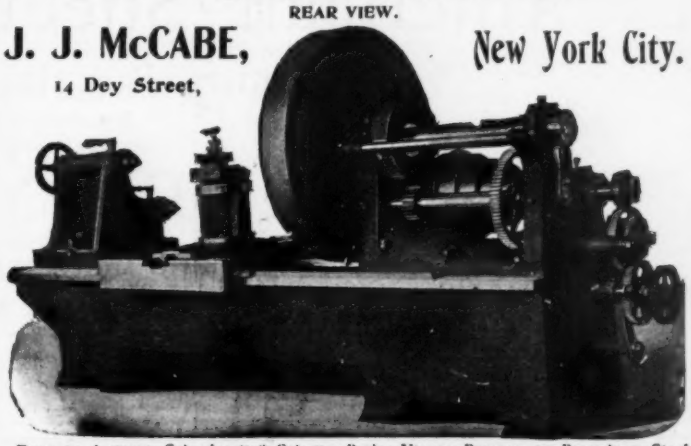

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Important Litigation Relating to Magnesia Covering Patents.

The Keasbey & Mattison Co., the owners of the patents for magnesia covering, have commenced a suit in the United States Circuit Court for the Southern District of New York against the **Philip Carey Mfg. Co., George D. Crabbs, J. E. Breese, Schoellkopf, Hartford & Hanna Co., J. F. Schoellkopf, Jr., James Hartford, W. W. Hanna, C. P. Hugo Schoellkopf, Jesse W. Starr, C. W. Trainer Mfg. Co. and C. W. Trainer** to restrain the defendents from making and selling magnesia covering for boilers and steam pipes containing more than 50 per cent. of magnesia, and especially coverings containing 85 per cent. of magnesia.

The bill prays for a preliminary writ of injunction, to be continued during the pendency of the suit, and upon the final determination thereof to be made perpetual, and also demands an accounting and damages.

☞ All persons are respectfully requested to refrain from purchasing covering infringing these patents, as such purchasing must of necessity lead to suit. ☜

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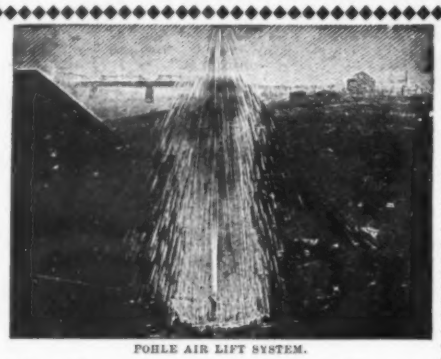

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MANUFACTURERS' RECORD.

A WEEKLY SOUTHERN INDUSTRIAL, RAILROAD AND FINANCIAL NEWSPAPER.

VOL. XL. NO. 10. WEEKLY. | BALTIMORE, SEPTEMBER 26, 1901. | $4.00 A YEAR. SINGLE COPIES, 10 CENTS.

Manufacturers' Record.

RICHARD H. EDMONDS, President.
THOMAS P. GRASTY, Vice-President.
OFFICE: MANUFACTURERS' RECORD BUILDING, BALTIMORE.

PUBLISHED EVERY THURSDAY BY THE
Manufacturers' Record Publishing Co.

RICHARD H. EDMONDS, Editor and General Manager.

THOMAS P. GRASTY, General Staff Correspondent.

SUBSCRIPTION, - - - - $4.00 a Year.
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BALTIMORE, SEPTEMBER 26, 1901.

COPY FOR ADVERTISEMENTS.

Advertising copy (changes or new advertisements) should reach us Saturday Morning to insure insertion in the issue of the following week.

For the first issue in the month we should receive copy by Friday Morning of the week preceding.

Dr. David T. Day of the United States Geological Survey has been secured for the position of chief of the editorial staff of the Engineering and Mining Journal of New York, and Mr. Edward Wheeler Parker, for ten years the statistician of the survey, and Dr. Day's chief collaborator in the preparation of the annual mineral resources of the United States, has been given the managing editorship. This announcement, made by the Engineering and Mining Journal, assures the mining world that the high standard of the Engineering and Mining Journal created by the late Richard P. Rothwell during twenty-eight years' conscientious and progressive work will be maintained and advanced. Readers of the Manufacturers' Record have long been acquainted with the valuable work of Dr. Day and his associate, Mr. Parker, not only through its record of their achievements as wide-awake members of one of the departments of the government, but also through their special contributions to our columns, and it is a certain guarantee of a greater and wider influence for the good of the mining industries of the country of the Engineering and Mining Journal that these gentlemen will be immediately occupied in directing its destinies.

Story of Southern Commerce.

In its issue of September 5 the Manufacturers' Record published an elaborate and comprehensive editorial reviewing the progress of Southern commerce generally during the past ten years, and pointing to the close connection between that progress at certain Southern ports and the enterprise shown there by divers railroads corporations in enlarging their terminal facilities. The subject is one of vital interest to the South, and is destined to become of greater importance with every year. As fascinating as the general story of this commercial development is, it becomes more so when the story of the advance of individual Southern ports is told. Appreciation of that fact has induced the Manufacturers' Record to arrange with representative newspaper men at the several ports to furnish it special articles embodying the details of ten years' growth. The first of these articles, from the pen of Mr. Willis M. Ball, editor of the Pensacola Daily News, is published on another page of this week's issue of the Manufacturers' Record. It tells succinctly and fully the tale of Pensacola, and it is hoped will conduce to greater efforts on the part of the citizens of that port to push forward its interests.

Not Overdone.

The Manufacturers' Record heard the oher day of a cotton-mill owner in North Carolina who has a grievance against it. This gentleman, who has been active in the wonderful mill-building movement in his State, and who now is largely interested in a number of establishments, advances the curious argument that by advocating the building of so many mills in the South the Manufacturers' Record has harmed the cotton-mill interests there, in that the business has been overdone and seriously injured, and, moreover, that where the few mills made money, the additional ones have themselves lost money and caused others to lose it.

We acknowledge that we have every reason to believe that we have contributed not a little to the wonderful strides made in cotton manufacturing in the South during the past ten or fifteen years. At the same time we cannot be held responsible for individual failures arising from a variety of causes, such as improper location as to labor, raw material, fuel and transportation facilities, unnecessary duplication of energies and improvident or unfortunate administration, or for such temporary haltings as that induced by cutting off of the Chinese trade for a year or more. We have never advocated the interests of any special mill; we have combatted systematically the theory that because one cotton mill at a particular point had made money, another like one at the same place or in another locality where conditions were absolutely dissimilar would do the same, and our whole policy has been to encourage the general idea that the South should equip itself conservatively and surely for the tasks which must surely come to it as the future situs of the textile industry in this country, if not in the world. We have, at the same time, advocated, in the face of opposition even on the part of some mill owners, national policies which, if carried out, will not only keep every existing Southern spindle at work, but will require many thousand more spindles there.

With all its wonderful progress in this direction, Southern mills are consuming but 1,500,000 or 1,600,000 bales of cotton annually, less than one-sixth of the annual crop of the raw material raised by the South. As long as any such disproportion between the raw material available and the raw material taken exists, so long will our North Carolina friend be in error in believing that the cotton-mill business in the South has been overdone, however unfavorable the temporary outlook may be to him as the chief owner of half a dozen mills, as a result of attempting to apply locally and prematurely what the Manufacturers' Record has marked out for the whole South, and for a long period of years. The fallacy of his argument appears when it is applied to other Southern enterprises. He might just as well contend that because iron and coal have been worked so successfully in Alabama, they should not be sought in Virginia and Arkansas; that because West Virginia has become the leading producer of petroleum in the United States, every gusher in the Beaumont field should be capped forever, and no well in any other portion of the State should be sunk; that because New Orleans is growing wealthy as a handler of foreign trade, that Newport News or Brunswick should relax their efforts in the same direction, and that because Texas is raising one-third of the cotton of the South, with vast territory yet to be brought under cultivation, the older cotton-growing States should retire from the field. If he will look around in these older States he will observe a most gratifying agricultural tendency, which may, perhaps, give him the hint necessary to relieve his mind of apprehension about the future of the textile industry. The very fact that the new cotton lands of Texas and other States have gained the primacy has resulted, after years of tribulation, in the adoption by sensible men elsewhere of the practice of making cotton their surplus crop as nearly as possible. That is to say, they have returned to the custom of raising their own supplies and of depending less and less for their actual comfort upon the price of cotton, which is subject to variations absolutely beyond their control. So with cotton manufacturing, diversification is the means of preventing temporary harm. If the South has overdone mill building, which we by no means concede, it has overdone it in building too many mills at one time to manufacture the same class of goods. But as long as one bale of Southern cotton is sent beyond the borders of the South for sale, so long will the mill equipment of the South be short of its necessities.

One Who Knows.

Two or three weeks ago Col. J. B. Killebrew, of national reputation as an authority upon Southern agriculture, as well as upon many other phases of Southern life, published in the Manufacturers' Record an article in which he set forth striking facts about the possibilities of farming in the South. His paper has attracted widespread attention, and his facts about wheat-growing were questioned in the North. In last week's Manufacturers' Record Colonel Killebrew met this questioning in an eminently convincing and satisfactory manner. His reply leads the Macon Telegraph to utter the following:

> Colonel Killebrew should possess his soul in patience. There was a day, not so long distant, when nobody in Pennsylvania thought that iron and coal could be developed in paying quantities in Alabama, Virginia, West Virginia, Tennessee and Texas; when nobody in Pennsylvania thought it possible for mineral oil to be tapped in Texas, Louisiana, Montana and California; when nobody in Vermont or Massachusetts thought the marble and stone quarries of Georgia would become formidable in competition; when nobody in the Ohio valley thought that melon culture would become one of the important industries of Georgia; when nobody in Delaware thought that the biggest peach orchards in the world would ever be found in Georgia. We could cite many another instance. Indeed, it has been only a few years since the cotton farmers of South Carolina, Georgia, Alabama, Mississippi and Arkansas were confronted by the market-breaking output of Texas, now leading all other Southern States in cotton production. Truly, nobody knows it all, not even the wise men who write things for the Northern papers. Colonel Killebrew may rest assured that time will bring to him his complete vindication.

The Macon Telegraph knows what it is talking about. Especially it knows about Southern wheat. It has helped to make Southern wheat grow.

Pleasing to Business Men.

The suggestion by the Manufacturers' Record of the name of Mr. Stuyvesant Fish in connection with the nomination in 1904 for the Presidency of the United States has not only attracted widespread attention of the press of the South, but is also bringing forth warm expressions of endorsement from representative Southerners. Col. J. B. Killebrew of Nashville, Tenn., for example, writes to the Manufacturers' Record as follows:

> I am heart and soul with you in your nomination of Stuyvesant Fish as a candidate for the next President. He is the broadest, cleanest, clearest-headed and ablest all-around man in the United States. Every pulsation of his heart beats in sympathy with the progress of his country. He is too great to be a politician, but he is a thorough patriot and statesman.

Mr. John W. Fries of Winston-Salem, a representative manufacturer of North Carolina, writes:

> I read with great pleasure your nomination of Mr. Stuyvesant Fish for the Presidency, and your more recent reply to your critics on that subject in your issue of August 29. I very much fear that your position is too good for this wicked world, but you are right, as usual. Since I have the pleasure of knowing Mr. Fish personally, I can endorse everything you say about him, and nothing would please me more than to give my vote to him if he would have it.

Reproducing copious extracts from one of the editorials of the Manufacturers' Record bearing upon this subject, the Macon (Ga.) News says:

> We have heard much talk of the kind from other quarters of the South, and wish we heard less of it. It would be very well to put a business man in the chair of the Chief Magistracy, provided he was a close student of the Constitution of his country, a statesman of courage, skill, experience and knowledge, a man with established views not only

as to the industrial life of the country, but as to our relations with foreign nations. He must know men and measures, and must comprehend the aspirations and traditions of all the people. And what is more, despite the conclusions of the Manufacturers' Record, he must be a party man. He must have behind him a political organization, founded upon some kind of creed. Otherwise he will fail in the White House, for this is distinctively a "party" and not a "personal" government. The will of the party is now and should ever be made more potential in our government than the will of any individual. It is right that the people, when a man comes before them for their suffrage, should ask what party flag he flies and what army he represents or seeks to lead. If we are to have a business man to offer for President, let us know whether he is a republican or a democratic business man. The difference is as wide as the poles.

The talk of the kind to which the News refers, to wit, the loss of real meaning in historic party names and the necessity for the business interests of the country to be made paramount to mere office-seeking politics, is becoming more general in the South with every year. Why any individual or any newspaper interested in the South's future should wish to hear less of it is hard to understand. It is that kind of talk which is calculated to place American politics upon a high plane and to diminish the power of the mere office seeker or office broker to the minimum. That kind of talk by no means implies that a candidate for office shall not be a party man. There may be times of extreme crisis when party differences must be absolutely sunk in united action of all good Americans for the welfare of their country. Such times, though, are few and far between. With the inevitable tendency of party to fossilize and degenerate, if unrestrained by proper and free discussion of public measures or undisturbed for an indefinite period in possession of power, the day is distant when there shall not be two great parties in American politics. They remain great in the true sense of the word only as long as they stand for great principles in government, and the opposition of one to the other is of benefit rather than of menace to the country only as long as it is based upon reason rather than upon appeals to ignorance and prejudice. There never has been a time in American history when all of the best men of the country belonged to the best party, as far as the material interests of the country were concerned. There has been a constant shifting of sentiment among the membership of parties, and in the course of time events have brought it about that the position of the parties themselves have been radically changed as to fundamental principles. We are now in one period of such a revolution, and business men are contending, both by their conduct at the polls and by their bearing between national campaigns, for practical results of party management. They are demanding for candidates the best men and for platforms the enunciation of the best principles, and they will support vigorously whatever party most nearly approaches, in its program, the combination of both. That is why the name of Mr. Stuyvesant Fish is being considered favorably by the business men of the South, who smile at such a statement as that of the Macon News, that the difference between a republican business man and a democratic business man is as wide as that between the poles.

Lessons for Labor.

The termination of the strike of the Amalgamated Association against the Steel Corporation, if there may be a termination of what never seemed to have a vital beginning, is likely to revive the apprehension felt in some quarters abroad, which subsided temporarily during the erratic movements of midsummer, which Mr. Shaffer of the Amalgamated Association seemed to imagine was a strike generalled by himself. In the midst of it the Textile Mercury of Manchester, England, asserting that the methods of battling trade-unionism have been reduced in the United States to a science uniformly successful in its application, and noting the confidence with which capital had accepted the contest thrust upon it by the steel workers, said:

With the maintenance of the industrial discipline, which the victory of the employers implies, will arise a very serious condition of matters for the iron, steel, engineering and machine-making industries of this country. Competition from American sources will become keener than ever, and everybody who knows anything of the inner workings of these trades knows how rapidly it is even now making progress; but under the conditions that will arise out of this contest it will be simply overwhelming. However, the greatest contributors to their own crushing defeat will be those who have introduced and are working the present policy of the English workers. In not a single establishment manned by trade-union workers is the production more than two-thirds of what it ought to be, and what it would be if it was not positively restricted by the policy they have adopted of doing as little as they possibly can. To produce one-third more than they do now from the existing plant would not entail any additional exertion; indeed, it would only require the taking off of the brake which they have applied and going at an easy, natural pace; and were they to put forth an effort, the production could easily be increased from what it is at present by one-half. Yet they expect to hold their own against the enterprise of American capitalists and the industry of American workers! We can only say it will prove—too late perhaps for their interests to be conserved—an idle expectation.

Much of this sort of valuable matter was brought to the attention of American labor during the summer. The collapse of the Shaffer enterprise clears the atmosphere wonderfully for a more complete appreciation of the truths of the dangers to labor in diverting labor unionism from its legitimate course into one of extravagant demands, both upon the individual worker and the employer. American labor will come to see, it is believed, that it has been greatly benefited by the failure of Shaffer, and for that American labor is to be congratulated.

Appreciation.

Writing from London, England, to the Manufacturers' Record Mr. John A. Harriss says:

It gives me pleasure to express to you that your valuable paper on Southern industrial, railroad and financial news has been of untold service to me in England, in addition to its ever-interesting, general, concise items. Its present high position among the world's many thousands of such publications marks out its future as the foremost paper of its kind. It shall always find a first place upon my desk.

Mr. H. G. Hopkins, formerly of Milwaukee, but now of Joplin, Mo., writes to the Manufacturers' Record that it seems to lead all others of its class in every way, and he adds:

I do not recall another publication that I have seen North or South which comes up to the spirit shown in the pages of the Manufacturers' Record. It certainly must reach the thinking, solid business men of the country, and must, in the nature of things, have not a little to do in the work of rejuvenation which is now going on all over the South. As soon as I get where I can do so, I shall use space in the Manufacturers' Record, and use it pretty steadily.

Mr. H. E. Gyles, secretary of the Hughes Specialty Well Drilling Co. of Charleston, S. C., in announcing to the Manufacturers' Record that his company has been given the contract for an eight-inch artesian well for the waterworks at Starke, Fla., writes:

This contract was secured by us as a result of our subscription to the Manufacturers' Record, as your publication led us to submit a proposition.

In a letter to the Manufacturers' Record Pedro Giarioli of Buenos Ayres writes:

The simple perusal of the number you sent me demonstrates at once the importance of the Manufacturers' Record, which you direct with so much skill. The advantages of such a publication are indisputable, especially as giving the strongest impulse to export trade, and, at the same time, is a practical factor in bringing together nations which, like our own, are constantly tending to broaden their mercantile relations.

Healthy Politics Essential to Southern Progress.

"Here is some very healthful reading for the laboring classes of the South from the Manufacturers' Record, a newspaper whose magnificent work for Southern industries entitles it to the profound respect and confidence of every Southern man," says the Greenville (S. C.) News in republishing from the Manufacturers' Record an editorial calling attention to the dangers in antagonizing developmental capital. Elaborating the same idea and applying it locally, the News says:

We commend these words to the sober consideration of our friends, the farmers and the mill operatives of the State, with the suggestion that they apply them to the incendiary language of Senator Tillman at Union a few days ago, where he threatened the cotton manufacturers with hostile State legislation and a personal "stirring up" of their laborers if they dare to oppose his will in the current senatorial campaign. The cotton-mill owners of the Piedmont may not be able to pick up their mills and walk to more desirable fields of industry, but both farmers and laborers may find to their bitter cost, as the Manufacturers' Record says, that "the curse which in South Carolina is known as Tillmanism and in Texas as Hogg-ism" has killed the goose which laid the golden egg.

The Greenville News indicates clearly here its understanding of the position which the Manufacturers' Record has maintained without varying for twenty years, and it displays a spirit which sometimes has been lacking among its contemporaries. For example, the Raleigh News and Observer says:

The Manufacturers' Record has done much for the South by its favorable mention of all Southern enterprises, and by its clear and strong presentation of the South's advantages, but it has at the same time undone part of its own good work by conveying an incorrect impression about Southern legislation. It has let its readers believe that capital is heavily taxed by Southern legislatures and discriminated against, whereas the truth is that great enterprises are taxed less upon their capital than in any other section of the Union, and there is no ground for propagating the idea that Southern laws or Southern courts are unjust to capital.

We wish the Manufacturers' Record would quit conveying this wrong impression, for it is thereby retarding Southern development almost as much as it advances Southern progress by its continued criticism of Southern legislation, based upon isolated and non-representative utterances. We say this in kindness, because we hate to see a paper that does so much good negativing much of its own work by this mistaken policy. It has given too much space to trying to convert the South to republican policies to be fair to the local State administrations in the Southern States, and has given some Northern capitalists a totally erroneous idea of the situation, making some of them believe that large investments and great corporations do not enjoy full protection and justice in every Southern State.

We believe that the News and Observer is honest in its criticism, although it displays rather a lack of knowledge of our attitude and an equally narrow recognition of the trend of the history of the United States in seeking by implication to substitute for argument charges of republicanism against the Manufacturers' Record. It ought not to be necessary for the Manufacturers' Record to announce that it is a party or political paper in no sense of the term. At the same time we suggest that to call a man a republican no longer holds water as an argument in the South except among the ignorant, and we regret exceedingly that the progressive and widely-informed News and Observer cannot rid itself of old habits. Be that as it may, one or two statements in this exract from its columns should be seriously considered.

In the first place, we should like to know the names of "Northern capitalists who have been given a totally erroneous idea of the situation" through anything that the Manufacturers' Record has ever published. In the second place, while we have, whenever the occasion demanded, criticised, and criticised with all the vigor we possessed, laws suggested or passed by any Southern legislature tending to impede the healthy progress of any Southern State, we deny that we have given any ground among right-thinking persons for the idea that "Southern laws or Southern courts are unjust to capital." What we have done, and what we shall continue to do, is to combat the influences in politics, whatever their origin, which would place or keep the South in the public mind as in opposition to the spirit of progressive America, and which, if not combatted, are certain to find baneful expression upon the statute-books of some Southern States, and thereby to become a menace to the South generally. We believe that prevention is better than cure.

Many events during the past six or seven years have justified the Manufacturers' Record in opposing vigorously the revolutionary position in politics assumed by the South at the beginning of that period. It has not been a question of party, but one absolutely of devotion to the material advancement of the South, for which we have worked in season and out of season. We regret that such papers as the Raleigh News and Observer and the Charleston News and Courier fail to recognize in our labor for healthy politics a perfectly harmonious element of our policy for the South's material progress which we rejoice gives them, with others, such satisfaction.

The Chesapeake & Ohio.

The income account of the Chesapeake & Ohio Railway Co. in the annual report of President George W. Stevens shows a gratifying increase in the earnings, the net income amounting to $2,001,897.04. The average mileage operated during the fiscal year was 1506.6. From this operation the gross earnings were $15,371,541.81, an increase over the preceding year of $1,969,471.54, divided as follows: From freights traffic $11,842,213.04, an increase of $1,747,068.84; from passenger traffic $2,826,813.39, an increase of $145,737.02; from express traffic $189,426.44, an increase of $17,518.54; from transportation of mails $349,884.45, an increase of $25,206.23, and from miscellaneous sources $163,204.49, an increase of $33,940.91. The operating expenses were $9,565,880.35, an increase of $859,094.98, divided as follows: For maintenance of way and structures $2,217,760.52, an increase of $352,346.77; for maintenance of equipment $2,253,307.18, an increase of $344,065.72; for conducting transportation $4,844,375.22, an increase of $158,065.48, and for general expenses $250,437.43, an increase

of $4617.01. Thus the net earnings were $5,805,661.46, to which was added income from other sources, $149,925.27, making a gross income of $5,955,586.73, an increase of $1,111,930.55.

From this are to be deducted for interest on funded debt, taxes, etc., $3,953,689.69, leaving the net income $2,001,897.04, an increase of $845,315.16. Of the net income $1,304,171.78 were expended for new equipment and construction, the equipment including twenty-five freight and three passenger locomotives, nine passenger cars, 302 freight cars, twenty-one cabin cars, and the construction of little more than fifteen miles of additional sidings. Besides these extraordinary expenditures, $2,275,212.02, provided for by the sale of 4½ per cent. bonds, were expended upon fifty miles of second track, upon 13.6 miles of the Piney Creek branch, upon 26.5 miles of Guyandot Valley line, upon the track elevation at Richmond, including the real estate, and the union passenger station at Richmond, which is expected to be occupied by November 1.

The total tonnage of freight carried during the year was 10,125,497, an increase of 378,657. More than half of this, 5,422,332, was coal and coke, an increase of 15 per cent., while the other freight carried, 4,703,165 tons, was a decrease of 6.2 per cent. The number of passengers carried was 2,630,574, an increase of 94,045.

These are the leading facts of the report, which is published elsewhere in this issue of the Manufacturers' Record, and they show a healthy result of the progressive policy on the part of the management of the great trunk system connecting seaboard Virginia and the Mississippi valley.

Calling Texans to Duty.

Not long ago an extra session of the legislature of Texas was called with the general appropriation bill as the subject of paramount importance, as upon its passage depended the regulation of the expenditure of public funds for the next two years. The special session expired, and a leading newspaper, commenting upon its failure to pass the bill, said:

> Lack of time cannot be pleaded, for enough time has been wasted on trivial matters to pass two appropriation bills. Other matters of greater importance were not submitted for consideration; nothing has happened to justify the laying aside of the question of providing for the running of the courts, of the State government, and of the eleemosynary and educational institutions for something needing more attention. * * * As matters stand now, another session must be held to arrive at the real object of the present one, unless the governor is prepared to run the State on credit for the next two years with a treasury full of money. Justifiable, under the circumstances, as a resort to such an expedient would be, it is nevertheless hardly to be thought of, as punishment for the legislature's dereliction would be visited on innocent shoulders.

Alluding to the possibility of another extra session, which, by the way, has been called, the paper said:

> Evidences of a design to fritter away another thirty days in the discussion of inconsequential propositions have already been given. Resolutions seeking to secure the submission of matters foreign to the purpose of this extraordinary calling together of the legislative branch of the State government have been introduced, indicating a desire to put in the time in the manufacture of campaign thunder instead of attending to legitimate subjects of legislation.

It may surprise some readers to know that these trenchant words appear, not in a New York organ of terrible capitalistic aggression, not in a paper devoted to the encouragement of investments in the Southern States, and, consequently, guilty of all sorts of horrible crimes whenever it undertakes to call attention to the elements of weakness in Texas or any other Southern State, but in the editorial columns of The Post of Houston, Texas. They are reproduced for the purpose of asking The Post whether a legislature spending valuable "time in the manufacture of campaign thunder, instead of attending to legitimate subjects of legislation," is not likely to damage Texas. The average man is inclined to judge a State by its legislature, for the simple reason that the legislature is supposed to represent the aggregate wisdom of the people of the State. To be sure, well-informed persons know full well that, in justice, the average Texas legislature must not be regarded as representative of Texas, and such persons are glad that the Houston Post, in rebuking the latest manifestation of the kind, is doing such notable work for the encouragement of outside capital longing to find remunerative outlet in the development of Texas' wonderful resources.

The Southern Farm Magazine.

Side by side with talk of inadequacy of labor at various points in the South are complaints about negro parasites infesting towns and cities and eking out a living derived from a career of petty crime by drains upon the earnings of servant girls. Observers in Northern cities, such as Philadelphia, New York, Chicago and Pittsburg, in which the negro is becoming a serious menace to the health and morality of the community, are acquainted with similar conditions, and it is only necessary to squint toward the book-learning, which has set the rising generation of negroes on the high road to the chain gang, the jail and the penitentiary, to perceive the origin of the growing curse. It is not confined to Georgia, to Mississippi, or to the South. It is found in every large city in the country where negro women have found the means to earn an honest livelihood, and where the great majority of them would continue to earn it were it not for the black parasites who follow closely upon their heels, and who not only hold them up regularly for the greater portion, if not the whole, of their wages, but who suggest to them the petty pilfering, the insolence and the shiftlessness which have become the bane of many a patient housewife. This curse can be cured, and the Southern Farm Magazine, in its October issue, makes a strong appeal for united action on the part of authorities of Southern States, counties and cities to suppress it promptly for the betterment principally of the negroes, but also for that of everybody concerned.

The leading article in this issue is by Col. J. B. Killebrew, who, from a broad and comprehensive practical experience and many years of unsurpassed opportunity for observation, deals with the immense agricultural possibilities of the South. He brings out facts which are often forgotten in comparing the South with other parts of the country, and truly says that one may safely challenge the industrial history of the world to find as rapid and healthy growth in such a short period and under such depressing circumstances and conditions as has been displayed by the Southern States during the past forty years. One of the most depressing of these circumstances is the result of the demoralization of the labor system of the South through emancipation of the negro. That this situation is righting itself and may be corrected is shown by another article, in which the experiences of North Carolina farmers are detailed to throw light upon the problem of farm labor. Other leading articles are: "The Success of Rice," by S. L. Cary; "Relations of Birds and Forests," by John P. Brown, and "Rabbits and Their Injuries to Young Trees," by H. Garman. Several letters from occasional correspondents contain suggestions of interest to a wide class of readers. One of them is from a gentleman who for many years has been engaged in attracting immigration to the West, but who now contends that the South is the proper field, and advises young men to settle there. The several departments of the Magazine are up to their usual character of timeliness and interest.

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IN HIVES OF INDUSTRY.

What New England Has Made of Small Natural Resources.

[Special Cor. Manufacturers' Record.]
Boston, Mass., September 19.

Providence looks as though it had been laid out and built by the passengers of the Mayflower, and its streets—as if those good old Pilgrims were too conscientious to take more land from the Indians than was absolutely necessary for their wants—being decidedly too narrow for the uses of modern traffic. But the people are of a stirring class, with all the push and go of the New Englander generally. They have succeeded in securing the exclusive privilege of entertaining the governor and other State officials and the legislature when in session, and left its former joint possessor of that privilege (Newport) to its yachtings, its sea breezes and surf-bathing, without a single taste of "chicken pie" or proud satisfaction of being one of the State capitals. An imposing new Statehouse has just been built here, presumably as part of the consideration for being named the capital city, relieving it much of its look of antiquity. The town seems quite alive; it has factories of almost every character, and boasts of an extensive traffic, as well as of a Roger Williams Park and splendid sites for summer resorts along the picturesque banks of its river and harbor. In this latter I can freely join in their boastful praise, but it does seem to me to be of most difficult navigation, for rocky promontories jut abruptly into and high ledges of rock rise above the waters, seemingly in the very middle of the stream, and boats glide by them so close that an athlete might easily jump from the upper deck and land in safety upon one of these rock islands that present the appearance of some giant moss-covered sea turtle swimming upon the waters. Yet these vast ships glide along calmly, and pilots shoot them between these rocky ledges and jutting cliffs with as much precision as William Tell directed the arrow that pierced the very center of the apple poised upon the head of his son.

Everybody knows, or pretends to know, Boston. But everybody don't know the surroundings of Boston and the thousand avenues of traffic that daily and hourly pour in their contributions to its immense trade. For a distance of twenty miles around it have sprung up small towns and cities numbering from 10,000 to 50,000 inhabitants, such as Newton, Watertown, Waltham and a hundred others, all full of factories of almost every kind, for in all the whir and thump and pound of machinery may be heard from every thoroughfare. And these all feed Boston traffic, like the human arteries that take the blood from the heart—Boston—and the veins that carry it back to the lungs—Boston—Boston being both the heart and lungs of all its surroundings, and, indeed, of nearly all Massachusetts. Apart from the numerous steamship lines that daily send out their heavily-freighted ships to domestic and foreign ports, the perfect network of railroads, with terminals at the two great north and south union depots, a perfect spider web of electric car lines radiating in every direction, with Boston as a common center, give such speedy and cheap transit that men and women from all the surrounding country and small towns go to Boston to do their trading and shopping.

No wonder, then, that Boston is the great mart of traffic of New England and the most expensive large city in America to buy at retail, for it seems everybody thinks you must pay a small additional per cent. to the "Hub." I merely passed through most of the suburban towns, and can give no adequate idea of their several industries, nor could anyone conceive the amount of enterprise and energy there displayed from reading a most extended and accurate description, for words, however elaborate, can never convey to the mind one-half the eye can take in by even a cursory glance.

At Waltham I remained some days and visited the plant of the American Waltham Watch Co., and was shown over the factory by the courtesy of the officials and witnessed the preparation to completion of the inside works of the watch by machinery, that with automatic precision (not posible to human hands) conveyed the piece of metal designed for a cog-wheel or the infinitesimal screws that bind the various parts together from one to another until dropped in its proper receptacle perfect and complete. It is indeed a wonderful exhibition of human skill and ingenuity that devised and constructed machinery to do the work of so many human hands with a precision and accuracy these human hands could never attain without further assistance than touching a button to put the machinery in motion and supplying the crude metal for it to work upon. I witnessed at the tap of the noon-time bell a living stream of men, women and girls, to the number of 2500 or more, healthy, happy and contented looking, all depending upon this great institution for their daily bread, and wondered where the bread would come from but for the vast prairies and rich fields of the great West and South. I wondered what developments there were in the future for the South, with its vast and varied resources, if New England, with nothing but her water-power and indomitable push and energy, had made with her rocky hills and comparatively poor valleys such a garden-spot of beauty and hive of industrial prosperity I have found wherever my eyes have turned or my feet have trodden. And now, in bidding adieu to this people (for I am now about to board the Merchants & Miners' Transportation Co.'s ship Chatham, with her bow turned southward), I desire to express my high appreciation of the kindly and hospitable reception I have met on every hand, and to the old federal soldiers I have met, whose friendly grip of the old Confederate veteran's hand and kindly sentiments for the people of his section, with whom they were once arrayed in deadly hostility, I wish to extend my acknowledgments and hearty reciprocation of friendly sentiments.

ELIAS EDMONDS.

Work upon the government navy-yard at Charleston, involving the expenditure within the next three years of $6,000,000, is to begin early next month. The work involves the construction of two dry-docks of stone and concrete 750 feet long and 140 feet wide, and accommodations for the torpedo fleet and machine and repair shops.

PROGRESS AT SOUTHERN PORTS. I--PENSACOLA

By Willis M. Ball, Editor Pensacola Daily News.

[Written for the Manufacturers' Record.]

Commercial and industrial development of Pensacola during the last decade has been phenomenal.

Up to 1895 the exports to foreign ports was confined to pitch-pine timber and lumber almost exclusively. During that year, as an experiment, the Louisville & Nashville Railroad arranged for a line of steamships to ply between Pensacola and Liverpool, carrying general cargo.

So successful was the experiment that the officials of the road authorized the expenditure of $500,000 for building new export wharves, warehouses, etc., which was soon followed by an appropriation for a 500,000-bushel grain elevator, elevator tracks, etc.

Steamship lines have been steadily added, until now there are regular sailings to Liverpool, Dunkirk, Hamburg, La Palice, Bordeaux, Genoa, Leghorn, Venice, Trieste, Havana, Bremen, Stettin, Antwerp, Dublin, Newcastle, Fiume, Rotterdam, Manchester, Havre, Hull, Belfast, etc., and a new line will be put on this fall to Rio Janeiro. There has also recently been added a regular line between New York and Pensacola, bringing in general cargo and carrying back naval stores, timber, etc.

To accommodate this immense traffic, the Louisville & Nashville road has been compelled at short intervals to add new side-tracks, and finally it bought a tract of land at Goulding, three miles north of Pensacola, where it has established a storage yard with tracks to accommodate 1000 cars, with double tracks thence to the export wharves.

In the city the railroad has twenty miles of tracks for side-tracking loaded cars, and there are eight and one-half miles of tracks on the wharves, alongside which vessels may discharge and receive cargo.

On Tarragona street wharf it has a substantial warehouse 800 feet long, and on Commandancia street wharf a two-story warehouse 1200 feet long, with elevated tracks, so that cars may be unloaded up stairs and down at the same time, there being accommodations under sheds for unloading 120 cars at one time.

At Muscogee wharf there are coal chutes and elevated tracks for unloading phosphate rock direct from the cars into vessels alongside.

At present a big contract for coal from the Alabama mines for the Mexican Central Railroad is being exported through here to Tampico, also another big contract for large monthly shipments to Galveston.

The Louisville & Nashville road has at present docking facilities for loading eighteen large steamships at one time, but the business is increasing so steadily that it has decided to purchase Central wharf, just west of its Commandancia street wharf, upon which it purposes building another gigantic warehouse.

The steady growth of exports to foreign ports from Pensacola is best shown by official figures from the records at the custom-house. These figures, by years, for the ten fiscal years ending June 30, from 1892 to 1901, follow:

Year ending June 30,	Value.
1892	$2,982,246
1893	3,812,447
1894	4,035,579
1895	3,042,113
1896	3,772,775
1897	8,021,112
1898	8,211,429
1899	14,214,690
1900	14,413,522
1901	14,350,508

The gain in exports for the five years ending June 30, 1901, was 280.02 per cent.

The tonnage of vessels that entered from and cleared for foreign ports during the same period is shown by the following official figures:

Year ending June 30,	Entered. Tons.	Cleared. Tons.
1892	333,367	374,763
1893	371,147	408,169
1894	397,664	395,394
1895	350,773	352,607
1896	317,424	380,091
1897	429,258	456,222
1898	380,160	399,938
1899	559,189	595,461
1900	520,153	595,229
1901	539,519	519,036

Another interesting study is the list of items of export for the fiscal year ending June 30, 1901, as follows:

Pitch-pine timber and lumber, sq. ft.	332,242,000
Hardwood lumber, sq. ft	1,065,000
Cotton, bales	166,004
Phosphate rock, tons	131,353
Rosin, barrels	105,787
Turpentine, gallons	534,184
Oak staves, pieces	783,302
Flour, barrels	11,651
Pig-iron, tons	8,639

The industrial development of the city has been equally as satisfactory. Last season the Pensacola Compress Co., backed by $60,000 capital, put in a fine hydraulic cotton compress which did such a successful business that the facilities have been increased for this season by building sheds for storing 30,000 bales of cotton. The establishment of this compress has attracted here numerous cotton factors, buyers, etc., and the indications are that this will soon become one of the most important of the cotton ports.

There is also an immense business done hereabouts in naval stores, most of which are exported through this port, a vast amount of capital being invested in the industry, which gives employment to thousands of wage-earners.

During the last fiscal year new corporations have been organized here as follows:

Baars, Dunwody & Co.	$300,000
Pensacola Shipbuilding & Dry-Dock Co.	600,000
Knowles Bros.	40,000
St. Anthony's Hospital	25,000
W. S. Garfield & Co.	20,000
Brown, Chipley & Co.	10,000
W. A. Durham & Co.	10,000
American National Bank	200,000
American Security & Redemption Co.	10,000
La Colonia Cigar Co.	5,000
Pensacola Development & Investment Co.	133,000
Escambia Oil Co.	1,000,000

Quite strong indications of petroleum in paying quantities exist in and around Pensacola, and machinery has been ordered by three different companies, which will sink experimental wells. Oil bubbles up through the salt water along the water front at various places, and samples of this analyzed by Professor Metz of New Orleans and chemists of other cities has been pronounced to be high-grade petroleum.

The business of catching and shipping deep-water fish to inland towns is an important industry here, giving employment to nearly a thousand men. The sales of fish for the last fiscal year aggregated $500,000.

Among the important industries are the Goulding Fertilizer Works, which ships its products to all parts of the world; a factory for making fertilizer from fish heads and offal, carriage and wagon works, three ice factories, brick works, soda water bottling works, etc., which give employment to a large number of men.

The Southern Bell Telephone & Telegraph Co. is now engaged in rebuilding its system here and putting in long-distance connections. At present it has 282 business and 203 residence connections.

One of the best indications of the commercial growth of a city is its postoffice receipts. The receipts of this office last year were $26,501.88, an increase of 12.89 per cent. over the previous year.

The entrance to Pensacola harbor is a straight cut with a depth of water all the way through of from thirty to thirty-three feet and a minimum width of 200 feet, which is to be widened to from 300 to 500 feet.

Capt. W. V. Judson, engineer in charge of harbor work, has recommended an appropriation of $150,000 to build a dredge for use at this port in carrying on the work of improvement, and Florida's senators and representatives have given their assurances that they will do all possible to have the appropriation made.

The census of 1900 gives Pensacola a population of 17,747, but a recent city sanitary census, carefully taken, without including suburban settlements, places the figures at 18,884. There are in the city 4523 frame and 394 brick buildings, of which 500 were erected during the last year. There are also quite a number of business and residence buildings now in course of erection, including a five-story office building to cost about $50,000.

The assessed value of real and personal property in 1900 was:

City of Pensacola	$3,111,810
County outside of city	1,756,197
Total	$4,868,007

The rate of taxation on this valuation, which is about one-third of actual cash value, is:

City	20 mills.
County	11½ "
State	5 "
Total	36½ mills.

There are here three national banks with a combined capital and surplus of $525,000, the total assets being upwards of $2,500,000, the deposits amounting to $1,657,067, and the loans and discounts to $1,599,702. There are also three local building and loan associations with an aggregate capital of $400,000.

The navy-yard, under the efficient and active management of Capt. W. W. Reisinger, the commandant, has undergone many improvements during the last year, including a full equipment of electrical machinery in the mechanical construction department, and a new steel wharf for coaling vessels, electric-lighting plant, etc. There will also be established here a torpedo-boat storage station, for which an appropriation of $100,000 has been made. There have also been many improvements at the military posts of Forts Barrancas, Pickens, Pensacola and McRee.

Gen. Russell A. Alger, Col. W. W. Mann and other capitalists some time ago bought from Martin H. Sullivan of this city an immense tract of valuable timber land, which they are now at work developing. In the northern portion of this county they have established a model city, known as Century, which has sprung up as if by magic, and its population is increasing after the order of Western mining towns of the olden days. The company is building handsome business and residence houses, will put in a waterworks plant, electric lights, etc. They are also building there one of the largest saw-mills in the South. They own here one of the best export wharves on the water front, which they will improve, as all the products of their mills, naval-stores plants, etc., will be exported through this port.

The local merchants are all preparing for a busy fall and winter trade, and the outlook was never better than it is at present. Immense stocks are being brought in, larger than ever before, and many of the merchants say that if business continues as it has opened up they will have to replenish their stocks several times during the season.

The hotels and boarding-houses are preparing for the heaviest winter travel hither ever known, basing their preparations upon letters already received asking for accommodations for the season.

The Southern States Lumber Co. of this city has solved the problem of utilizing pine lands after the timber has been cut therefrom. It has fenced in an immense tract of this land near Muscogee, in this county, and in Baldwin county, Alabama, upon which it is growing cassava, velvet beans, cowpeas, etc., for forage for cattle. It has now over a thousand head of native cattle, which it is crossing with Hereford bulls, it being its intention to raise beef cattle for the local and other markets.

This undertaking, which has now passed the experimental stage and proved most successful, has attracted widespread attention. The use of cassava for food for the cattle has aroused the interest of some of the millionaire packing-house people of the great Northwest, and they have sent representatives here to inspect the company's ranch and farms with a view to buying lands and growing cassava and velvet beans to feed their stock, and there is a strong belief here that some of them will establish great cattle ranches in this neighborhood.

PIG-IRON ADVANCED.

No Concert of Action by Sellers at Birmingham.

[Special Cor. Manufacturers' Record.]

Birmingham, Ala., September 24.

The iron market closed the past week with an improved demand, better tone and practically stiffer prices. Some large buyers came into the market, and several round lots were taken. The aggregate sales for the week were fully equal to the furnace output, and in some instances exceeded it; in fact, it was a very encouraging week, and indicated that the fall and winter buying had set in. Some parties who had been holding out of the market came in and paid current market value, with very little contention as to price, showing that their necessities demanded the iron. The acceptance of an order was frequently followed by request for anticipation in delivery, and the time of delivery was accepted in some cases for first quarter of 1902 when no better could be done.

Your correspondent saw one telegraphic order for 9000 tons of various grades in one lot. The price was carefully withheld, but there is good reason for the assertion that it was based on $10.50 for No. 2 foundry. A few lots of that grade went at that price to early buyers. It was then moved up to $10.75, and it went as readily at that price as it had gone at $10.50; in fact, a special brand carrying a specially desired analysis went at $11. Some No. 1 foundry special take was sold at $12. No. 2 soft was sold at $10.75, and in one or two instances $11 was obtained. No. 3 foundry brought $10.25, and in a few cases $10.50. No. 4 foundry was $9.75, and gray forge brought $9.25 and $9.50. Ability to make prompt delivery had much to do with the price. Those who wanted it, prompt shipment, wanted it badly enough to pay a premium to get it. This explains the variation and irregularity in prices. While one can say there was no concert of action to mark prices up, the condition of the market was such that inside prices walked up to the outside prices and stayed. Practically there was an advance of 25 cents per ton without any effort on the part of sellers.

In basic iron there was nothing done. Desired deliveries cannot be obtained.

Some few export orders were worked, but they were not significant in volume. The decadence of this trade is shown by

comparing the January shipments of 9000 tons with the August shipments of 131 tons. The records show that while for the first eight months of this year there were 19,582 tons of export shipments from Alabama and Tennessee, last year for the same period they were 93,379 tons.

The domestic trade shows an increase in shipments of 149,000 tons, the figures being 985,000 tons, against 836,000 tons. This year the shipments in March were 145,254 tons, while June scored 106,569 tons. The shipments from the Birmingham district for the eight months were 535,542 tons, an increase of 19,000 tons.

The cast-iron-pipe shipments, same period, were 110,419 tons, as against 45,708 tons last year. The Birmingham district shipped this year 54,500 tons of pipe, as against 13,500 last year.

The shipments of steel have averaged about 5000 tons per month.

So we have held our own and a little better.

Newcomers are flocking in, building operations are unceasing, while there is much complaint of labor being far short of the demand. There is plenty of work for all the artisans that may come.

J. M. K.

A LOUISIANA GUSHER.

An Oil Well Brought In Not Far From Jennings.

Upon the heels of the prediction of Mr. C. F. Z. Caracristi that oil would be found at Jennings, La., a well was brought in on Saturday last near that place. Mr. Scott Heywood, who is largely interested in the well, is quoted as follows regarding it:

"We have a gusher at Jennings, La. It was brought in today, and the possibilities are that Spindle Top will be insignificant when compared to the Louisiana field. The well gushed nearly to the top of the derrick. We set the casing at a depth of 973 feet, and are forty-seven feet in the oil sand, making a total depth of 1020 feet.

"When bailing had been in progress for a few hours the water began to rise to the top of the casing, and the gate valve was closed pending my arrival. When I arrived the gas pressure was sufficient to force out a column of water over 1800 feet, which is something never heard of on Spindle Top. The well gushed nearly to the top of the derrick for five minutes, when it subsided. We ran the bailer down and discovered that the sand which contained the oil deposits was very thin, and had filled the hole 1000 feet. I will return to Jennings tomorrow, and bailing will be resumed.

"Of course, we do not know how thick the oil stratum is, and I do not presume to know. The drillers have been instructed to bail out the well, and no further drilling will be done. It is my plan to bail until a sufficient cavity is made to prevent further filling in of sand. Should it require a week, I should judge that a sufficient cavity can be produced to eliminate the filling up of sand, which is better than sinking the casing deeper."

In that connection the following interview given a few days previously to the New Orleans Picayune by Captain Lucas, the developer of the Beaumont field, is of interest:

"In regard to the Louisiana oil fields, I can only repeat what I have all along said, as published from time to time in the Picayune. The Louisiana region, if properly handled and developed, will yield oil in enormous quantities. Two years ago, when I was working in Louisiana, I brought in the Anse-la-Butte well, but it did not yield oil in paying quantities. Those who owned the property would not let me go deep enough, and I accordingly went over to Beaumont and eventually brought in the famous gusher. The Texas region is not better than the Louisiana; in fact, I believe the latter is superior to the former. The oil I drew at Anse-la-Butte is certainly of a higher grade than the Texas oil, and is, in some respects, better than any oil in the United States. I took a sample from St. Mary, and have tested it with the above result.

"This statement does not apply to the oil at Sulphur City. There it is dense and of an inferior grade. The Jennings, Anse-la-Butte and Terrebonne oil, however, is the best I have seen anywhere. Had I remained in Louisiana instead of going to Texas I believe I would have been as successful here as I was there, for the oil is almost certainly as abundant in the Louisiana region."

"What do you think of Professor Caracristi's statement that oil and natural gas exist throughout Southwest Louisiana?"

"I have not read the interview, but I know Professor Caracristi, and I know also that you can rely upon everything he says. I do not think he made the statement that oil can be found throughout Louisiana. He probably said throughout St. Mary and Terrebonne parishes. His statement about the natural gas is most probably correct, for I know it exists. The only question heretofore existing in my mind was if it occurred in paying quantities. If it does, Louisiana will certainly prove to be a lucky State. Wherever natural gas is found the surrounding country invariably becomes prosperous, for it furnishes a fuel cheaper than can be had from any other source. In Louisiana it would make the salt mines as valuable as a gold mine. We are now annually importing thousands of pounds of soda-ash, caustic soda, bleaching powder, etc., all of which are by-products from salt. With cheap fuel, the Louisiana salt mines can furnish all this, besides piping the oil to other localities and selling it at a low rate and at an enormous profit.

"During my trip North I found that Beaumont, Jennings and other places in Texas and Louisiana are as well known as New York or Boston. The whole North and East is talking about the wonderful resources of the South, of Texas and Louisiana. If oil gushers are brought in from the Louisiana regions, the lucky places will be as fortunate as Beaumont. I think, in fact, they will be more fortunate, for a large part of the boom and speculation seen by us in Texas will be absent from the Louisiana region. The growth of the favored sections will be less rapid, may be, but it will be anchored upon a firm business foundation."

The Kentucky Oil Field.

[Special Cor. Manufacturers' Record.]

Somerset, Ky., September 23.

The Kentucky and Tennessee field is traversed for sixty-seven miles by a four-inch pipe line, which, with its connections, makes the pipe-line system nearly 125 miles in length. This oil is pumped from Bobs Bar, Spurrier, Tenn., to Somerset. The development of this field has extended over several years, a large number of strikes being of minor consequence.

W. G. Strubbe, field manager of the National Consolidated Oil Co., has recently struck the gusher of the field, his well, Dalton No. 1, producing over 1500 barrels per day when it was first struck. This company has purchased the mineral rights, including oil, in over 120,000 acres of territory in this field. It has purchased about 1000 acres of land in the oil-producing district of Texas and 800 acres in the Kern valley, California field. This company has let contracts for two wells to be drilled immediately and two wells to be drilled every sixty days for the period of three years. Mr. J. P. Hornaday is its Cincinnati manager.

The oil produced in the Kentucky and Tennessee field is of the green color or Pennsylvania quality, and commands a price of $1.25 per barrel. The development is proceeding rapidly, and within the next two weeks some twenty wells are due to come in the Kentucky and Tennessee field.

The National Transit Co., which is a branch of the Standard Oil Co., is negotiating for an oil refinery at Somerset. It has since the first day of last January spent over $200,000 in the Kentucky and Tennessee field.

To Ship Texas Oil East.

In a letter to the Manufacturers' Record Mr. M. B. Hillyard of New Orleans, long active in the promotion of Southern industries, writes: "A contract has just been closed for the sale of Beaumont oil for delivery by water from Sabine Pass, Texas, to Atlantic seaboard cities. The oil will be loaded in bulk and towed to New York, Boston, Providence and other cities, and an agency for its sale will be opened shortly in New York city. The company whose oil is to be sold has two wells on Spindle Top, in the Beaumont district, and owns a pipe line to Sabine Pass. Its stockholders at New Orleans and elsewhere are men of wealth, business reputation and capacity.

"This movement may be regarded as marking an era in Southern progress. It is believed that the oil for use as fuel, for both manufacturers and domestic consumption, can be sold so cheaply as to make it eagerly sought for in the various ports on the Atlantic seaboard. I know of no happening in the South in late days as significant as this.

"A transportation company will be organized as soon as capital is secured, and that phase of the business will be managed by a gentleman who has had large experience in transportation on the Pacific coast."

FOR A TIE FACTORY.

Jefferson, Texas, Suggested as an Advantageous Location.

Jefferson, Texas, September 19.

Editor Manufacturers' Record:

Knowing of your untiring efforts in behalf of the industrial interest of the South, and appreciating that your efforts are being crowned with great success, we have deemed it not inappropriate to call your attention to this section of the great Southwest, which in a measure has been overlooked, and present the possibilities of large dividends on an investment we shall suggest. It may not possibly have been thought of in the connection we propose, that west of the Mississippi river nearly 7,000,000 bales of cotton is raised annually, or about one-half of the crop of the South. It requires fifteen pounds of ties to the bale, or 52,500 tons, to market the crop. In addition to this, the oil mills and cotton mills require several thousand tons, while there are millions of shingles made on the territory named (Texas, Louisiana, Arkansas and Indian Territory) which require bands for baling. To supply the demand would require a large plant, yet its paying capacity would be larger in proportion than any plant in the South or Southwest.

Jefferson is in Marion county, at the intersection of the Missouri, Kansas & Texas and Texas & Pacific railways, and is the initial point of the Jefferson & Northwestern, also at the head of navigation of Cypress river, which enters into Red river, thus giving water connection with New Orleans.

In Marion and adjoining counties is found as fine iron ore as can be found in any portion of the South. It is inexpensive to mine, and is easily reduced. The analysis shows from 50 to 60 per cent. metallic iron, much of it within the Bessemer limit. The ore fields are reached by the Missouri, Kansas & Texas, International & Great Northern and Texas & Pacific railways. Jefferson is geographically in the center of the cotton-producing section of the Southwest. The territory named can easily be supplied from this point on a cheap rate of freight. Then why would not a cotton-tie mill at this point to supply the large demand prove the best of paying investments? The demand for the product of such a plant is not based on any other consideration than the size of the crop made. It makes no difference of the condition of any other interest in the country. The cotton tie must and will be sold. There is no point so desirably and advantageously located for finding a constant and regular home demand for the product of a plant as Jefferson presents for a cotton-tie mill.

Every requisite exists here that the most exacting could demand. The iron has been sufficiently developed to demonstrate beyond doubt its quality, and the ore fields have been sufficiently examined and gone over by experts to satisfy anyone as to the question of quantity.

The markets of the district named are reached by two independent systems of railways and their connections. Quite a territory in the district can be reached by water.

We will not suggest the percentage of profits (for fear of being charged as being visionary) that such a plant will make, but will only suppose, as food for thought and the use of the pencil, that by making only $5 per ton net profit, the entire trade is supplied, and at a less price than is now being paid. The retail price this season is from $50 to $60 per ton. If the furnaces are carefully and properly handled, possibly 95 per cent. of the product will be made into ties, if not more. Suppose only one-half of the product of the furnaces go into ties, the rest sold to the trade, even then the profits would be astonishing.

In connection with operating the tie mill, the fuel for boiler purposes can be figured on as being low. Many of the factories of the State are using crude petroleum instead of coal. A test has been made with four boilers, two 200 horse-power and two 350 horse-power. The oil used was the residue from the refining plant at Corsicana. It was estimated that seventy-five barrels per day would be used, as it required twenty-four tons of coal a day. It was demonstrated that the steaming capacity of the 200-horse-power boiler using oil was equivalent to the steaming capacity of two 350-horse-power boilers using coal, and the saving due to the use of oil was about 33 per cent. It is within the range of the advancement and progressiveness of the age to safely predict that crude petroleum will be used in the very near future in smelting of iron ore, and superseding coke in rolling mills and foundries where coke is at all high, and especially in the Southwest. When this is done, Texas can and will make the cheapest pig-iron in the United States. JEFFERSON IRON CO.

The value of property owned by negroes in Georgia has increased in twelve months from $14,118,920 to $15,629,811.

It is expected that in the business section of Jacksonville, Fla., destroyed by fire, some of the new buildings will be ready for business by October 1.

RAILROADS.

[A complete record of all new railroad building in the South will be found in the Construction Department.]

PUSHING TO COMPLETION.

Illinois Central Terminal Facilities at New Orleans.

It is expected that the additional terminal facilities at New Orleans of the Illinois Central Railroad Co. adjoining its Stuyvesant dock property will be ready for use early in the coming winter. They consist of two elevators having a combined capacity of 2,500,000 bushels, with necessary wharfage and trackage, which, when completed, will represent a cost of about $1,700,000. This expenditure will bring the total investment since 1891 of the Illinois Central Railroad Co. in terminal facilities at New Orleans up to $4,200,000. The principal items of former expenditures are as follows: A connecting double-track line along the levee between Stuyvesant dock and the company's Southport elevator system, costing $1,000,000; the Stuyvesant dock elevator facilities, more than $600,000; a new gravity yard almost completed at Harahan, four miles above New Orleans, about $450,000; an in-freight house, $83,500; the Poydras street elevator, $82,000; a terminal yard near the passenger station, $75,000; a second switching main track for about four miles along the river front from St. Joseph street to Front street, $64,000, and a new levee yard, $50,000. In addition a large number of wharf sheds, cotton sheds, fruit sheds and yard tracks have been constructed. The gravity yard at Harahan has a capacity of 3222 cars, and in it is the engine-house, with complete facilities for coaling and water.

New Transcontinental Project.

A plan to form a new rail and water route from the North Atlantic coast to the Pacific is being promoted by a company of United States and Mexican parties which has secured a charter in Pennsylvania and Delaware. The plan is of a very elaborate character, and contemplates the construction of a railroad system across Mexico from Tampico to the harbor of Banderas, on the Pacific coast, an estimated distance of 500 miles. The company promoting the railroad has been organized under the title of the Mexican Continental Railway Co. Henry Heil of Philadelphia is president; Dr. Joseph Hancock of Philadelphia, secretary and treasurer, and J. L. Ober of the City of Mexico, vice-president. It is to be operated in connection with a line of steamships from Tampico to Philadelphia, and possibly Baltimore, also a fleet of vessels which will ply between Banderas, the Sandwich Islands and Asiatic ports.

The organization of the company has been practically the work of Senora Velasquez Beard of the City of Tepic, Mexico. Senora Beard, who appears to bear the same relation in Mexico that Mrs. Hetty Green does in the United States, has taken up plans in which her deceased husband became interested, and it is stated that through her the company has secured important concessions from the Mexican government. She is reputed to be very wealthy, owning mining property in the Mexican Republic and Arizona. In a letter to the Manufacturers' Record Senora Beard writes that the new route will shorten the distance between North Atlantic seaports and China by fully 1700 miles, according to estimates which have been made. It is expected to secure considerable traffic not only from China and Japan, but from the East Indies, which now comes to the United States by way of the Suez canal. The steamships leaving the North Atlantic ports will include Pensacola on the route to Mexico, thus placing the Florida city in direct communication with the Mexican Republic and the Pacific.

A Railroad That Builds Up.

A very interesting statement has recently been made public by Mr. George C. Wilkins, general agent of the Pennsylvania Railroad at Baltimore, which indicates the policy of this corporation towards the communities which it reaches. The extensive improvements which have been made in recent years by the Pennsylvania Company at Baltimore and others which are now in progress emphasize the truth of Mr. Wilkins' statement, which in part is as follows:

"The policy of the Pennsylvania Railroad Co. has always been to build up the properties in which it is directly or indirectly interested. The dominating influence of the Pennsylvania Railroad Co. in its two Baltimore lines—the Northern Central and the Philadelphia, Wilmington & Baltimore roads—for twenty-five years past should be a sufficient indication of its governing policy for the future.

"The transportation and the mercantile and industrial interests of Baltimore are so closely interwoven that they cannot exist and flourish independently of each other, so that all the business interests of the city will advance, or they will all decline. I believe that they will advance.

"There may be no more sentiment in the management of a great railway corporation than in the management of a great newspaper; nevertheless, so far as the Pennsylvania Railroad Co. is concerned, the guiding sentiment in its management is good common sense; moreover, there is another old-fashioned principle—common honesty—involved, and, in my judgment, there is no more probability of this great corporation lending its influence to depreciate the business of Baltimore to the advantage of Philadelphia, for instance, than there is of lending its influence to the building up of the city of New York at the expense of Philadelphia."

Central of Georgia Report.

The annual report of the Central of Georgia Railway Co. shows that the operation of the system during the last year has been attended with very gratifying results. The statistics indicate an increase of nearly 20 per cent. in passenger business and in the freight tonnage. Two hundred additional freight cars have been constructed in the company's shops, and forty-five miles of the main line were relaid with heavier rails. Not less than 217 new industries were located in the territory reached by the Central, representing an aggregate capital of $2,163,000 and giving employment to nearly 5000 persons. The policy of the company has been to encourage not only industries, but agriculture and business of all kinds wherever possible, and the results are shown in the number of settlers who have been attracted to Georgia within the year.

Norfolk & Western Improvements.

Although the Norfolk & Western Railroad Co. carried out a number of improvements during the last fiscal year, as shown by the annual report, several important branches will be completed within the present year. They include a line from Ivanhoe to Speedwell, Va., which will reach the smelters in that part of the State. The Cane Creek branch in West Virginia is about six miles in length, and grading is nearly completed. This railroad extends to coal beds near Duhring. As already noted, surveys are being made for a branch along the New river in North Carolina which will add considerable mileage to the system if constructed. Construction is also in progress on a number of spurs from a mile to five miles in length to reach various industries.

Another Line to the Oil Field.

The plan to extend the International & Great Northern system into the Texas oil fields has reached a point where it is probable that construction work will begin in the near future. Thus far none of the Gould lines has been built through the portion of Texas referred to, and the extension proposed will require eighty miles of construction between Spring and Beaumont. It is understood that the branch will be completed within the next year. With its own line to the oil fields, it is probable that the International & Great Northern Railroad will follow the example of the Southern Pacific and the Santa Fe and use oil as fuel for its locomotives.

Property for Terminals.

A dispatch from Tampa, Fla., states that negotiations which have been in progress for some time to secure terminals for the Tampa Bay & East Coast Railroad have been completed by the purchase of 170 acres on the harbor. It is understood that the company intends erecting warehouses, also elevators for handling phosphate on the wharves which will be built. The railroad proposed will extend from Tampa to the phosphate-mining section in the vicinity of Bartow, and it is understood that the contract has already been let. A syndicate which includes R. G. Rhett of Charleston, S. C., is promoting the enterprise.

Three Lines to Combine.

Plans have been prepared to consolidate the St. Louis & Memphis, the Memphis & St. Louis and the St. Louis, Caruthersville & Memphis railroad companies under the title of the St. Louis & Memphis Company, with a capital stock of $1,125,000. The roads referred to are operated in Eastern Missouri, and represent a total length of forty-two miles. It is understood that the St. Louis & San Francisco Railroad Co. has made an offer to purchase the lines, and that the consolidation is being effected in order to make the combined roads a division of the system referred to.

The Southern at St. Louis.

A dispatch from St. Louis says that the Southern Railway Co. has under consideration the location of elaborate terminals at St. Louis which will include another bridge across the Mississippi river. Some time ago the Manufacturers' Record referred to the fact that a company had been chartered with M. M. Stephens, mayor of East St. Louis, Ill., and others to build such a structure. It is understood that representatives of the Southern Railway Co. have secured the charter owned by these promoters.

Atlanta Railway Lines.

Negotiations have been concluded by which an undertaking has been reached between the Atlanta Railway & Power Co. and the Atlanta Rapid Transit Co. A syndicate composed of the Mercantile Trust & Deposit Co. of Baltimore, the Old Colony Trust Co. of Boston and the New York Security & Deposit Co., it is stated, have secured control of the Atlanta Railway & Power Co., and in future it will be operated in harmony with the Rapid Transit Company. The corporations represent $3,000,000 in stock and $7,000,000 in bonds.

To Ballast the Seaboard.

A dispatch from Columbia, S. C., states that the Seaboard Air Line has completed arrangements for ballasting the system between Richmond, Atlanta and Tampa with rock, and has given a contract to the Stewart Contracting Co. of Columbia, S. C. A plant has been erected near Henderson, N. C., for furnishing material, and work is to begin immediately upon the portion of the system between Henderson and Columbia.

Railroad Notes.

The Ozark & Cherokee Central Railroad Co. has ordered sixty freight cars and two passenger cars for its line, which is now being constructed. The rolling stock is to be delivered immediately.

The Louisville & Nashville Railroad is receiving a consignment of locomotives built by the International Power Co. of Providence, R. I. The engines are among the largest in service in the South, and will be used principally in passenger traffic.

The Washington, Potomac & Chesapeake Railroad Co. has secured control of the Washington & Potomac Railroad, extending from Brandywine to Mechanicsville, Md., a distance of twenty-one miles. This is a narrow-gauge line which, it is understood, will be changed to standard gauge and extended from its present southern terminus to the Potomac river at Point Lookout.

Big Exposition Buildings.

About $7,000,000 will be spent on the buildings for the Louisiana Purchase Exposition, which will be held at St. Louis in 1903, and the work of letting contracts will begin about December 1. The letting will begin with the contracts for four big buildings, which, with their surroundings, will cost about $4,000,000. The work will be in direct charge of Mr. Isaac S. Taylor of St. Louis, chairman of the commission of architects and director of construction and maintenance for the exposition, one of the leading architects of the country. The designs for the separate buildings, assigned to the individual members of the commission of architects, will be submitted in scale drawings by the middle of October, and the working drawings of the main buildings, to be let first, will be ready by November 1. The lettings will be advertised for about three weeks in the leading technical journals throughout the world. There will be no geographical restriction on bidders. The main stipulation will be that the buildings be ready for occupancy at a date sufficiently far ahead of April 30, 1903, the date fixed for the opening of the exposition, to allow exhibitors time to prepare their displays for the opening. To secure the completion of the buildings by this time a sufficient bond will be required of the successful bidders. Materials will be employed in the construction work and conditions will be so adjusted that contractors may fulfill their contracts.

The New Orleans & Carrollton Railroad, Light & Power Co., which represents the consolidation of the Carrollton Railroad Co. and the Edison and Merchants' electric companies, it is announced, will distribute electricity not only for lighting and power purposes, but for heating and cooking. It is stated that the company proposes installing apparatus of this kind at such rates that the use of the electric current will be much more extensive in New Orleans than hitherto. The company is capitalized at $7,500,000.

FOREIGN TRADE.

This department is designed to set forth opportunities for the extension of the trade abroad of American manufacturers, and to record facts about the rapidly-developing commerce of the South.

TRADE WITH ARGENTINA.

The Outlook for American Goods at Buenos Ayres.

In a letter to the Manufacturers' Record Pedro Giarloli of Buenos Ayres writes:

"The commerce of this republic in general is at present unfortunately passing through a crisis which keeps it back, and which is due to a series of misfortunes which have borne with a heavy hand upon the country in recent years. These include poor harvests of cereals in the provinces of usually greatest production, a heavy fall in price of wools in the European markets, sickness among the animals on our plantations, and finally, the floods which overran the provinces which maintain our herds, with the usual result of high mortality among the cattle. Our principal sources of wealth being thus attacked necessarily affects our commerce directly and indirectly, but we hope for a period of favorable reaction in the near future, for the land is productive and can readily overcome the losses which it has sustained.

"Articles of North American manufacture meet with great favor here, not only on account of their quality, but because of their character. Many houses here are engaged in handling such goods exclusively, with most excellent results. There is no doubt that Europe competes to a certain extent in prices, but there is also no doubt that the importation of North American goods is continually on the increase. In my judgment, to give greater impetus to the business the practical plan adopted by English, German, French and Italian merchants ought to be adopted, viz., the naming of local agents on the spot who would greatly facilitate reciprocal commercial transactions."

American Locomotives Abroad.

Mr. Dean B. Mason, deputy United States consul-general at Berlin, in pointing to opportunities for the sale of American locomotives in European countries, which, unlike Germany, France and England, have no adequate facilities for building them, writes:

"In order to sell American locomotives in Europe it would seem desirable that our leading American locomotive builders should establish an agency at some central location, such as Berlin or Paris, where close track could be kept of the needs of the European market, and whence representatives with good technical education could be sent to confer with representatives of foreign railroads. The importance of having representatives of sufficient technical knowledge to answer all possible questions and versed in foreign languages was strongly insisted upon by a very successful seller of American machinery with whom the matter was discussed. Recent sales to France and Russia and the satisfactory results of the experiments in Bavaria tend to show that there exists an opportunity for the sale of American locomotives in Europe. In order to make the most of this opportunity, all possible facilities should be given to the foreign buyer to judge of the nature of the American locomotive without the necessity of sending or going to the United States."

Terminals at Galveston.

The warehouse just constructed for the Mallory Line of steamships at Galveston, Texas, is of unusually large dimensions. It contains over six acres of floor space, and is 1278 feet in length. Enough wharf room is afforded to allow three steamships to be loaded and unloaded at the warehouse at the same time. The wharf machinery includes two electrical conveyors which have a capacity of transferring fifty tons of cargo an hour. Sufficient railroad track has been constructed to allow 100 cars to be handled in the warehouse and vicinity without delay.

Pensacola to South America.

Arrangements are being made for a regular steamship service from Pensacola, Fla., to Rio Janeiro, Brazil. Messrs. Bull & Co. of New York and South American parties have been considering the plan. If decided upon the line of vessels will probably be operated in connection with the Louisville & Nashville Railroad and use the terminals of this company at Pensacola.

New Orleans to Rotterdam.

The first vessel on the steamship line between New Orleans and Rotterdam has sailed from the former port with a general cargo which includes 200,000 bushels of grain. The Llangollan is a new steamship with a carrying capacity of 15,000 bales of cotton. The line is being operated in connection with the Illinois Central Railroad Co.

Notes.

The Nicaraguan Steamship Co., engaged principally in the banana trade, has decided to make Galveston its port of entry.

A dispatch from Galveston, Texas, states that a line of steamships may be placed in service in the near future between Galveston and Central America to carry fruit. W. A. Ross of Columbus, Ohio, is one of the promoters of the plan.

New Morgan Line Ship.

El Dia, the latest addition to the Morgan Line of steamships, has been placed in service between New York and New Orleans. Like the others in the fleet built for this service, she was constructed by the Newport News Shipbuilding & Dry-Dock Co. She is 406 feet in length, 48 feet beam and 33 feet 9 inches in depth. The vessel has accommodations for passengers as well as freight, and cost $600,000.

The Philadelphia Textile School will open for its eighteenth season September 30 under conditions which are most satisfactory to its many friends. The staff of instructors, which has proved so efficient in past seasons, remains unchanged, and under the able guidance of Director E. W. France, who has just returned from an inspection of similar European institutions and manufacturing establishments, it will offer even greater opportunities for the student. The incoming class will be by far the largest in the school's history, showing that public appreciation continues to smile on this, the first effort at textile education in America.

Col. A. J. Milstead, manager, and his two sons, Messrs. Drew and F. D. Milstead, superintendents of the Tallassee Falls (Ala.) Manufacturing Co., have resigned. It is reported that their resignations were given because they intend to build a large cotton mill at Wetumpka, Ala.

The Crowley Farming Co. has been chartered at Crowley, La., with a capital stock of $100,000, for the purpose, primarily, of constructing canals and sinking wells for irrigating purposes, and to build and operate rice mills.

TEXTILES.

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

MARKETS FOR COTTON.

Observations of Mr. Whittam Before New England Manufacturers.

One of the most suggestive papers upon the program of the Pan-American semi-annual session of the New England Cotton Manufacturers' Association, which began on September 25 at Niagara Falls, was that by Mr. William Whittam, Jr., of Woonsocket, R. I., on the possibilities of trade expansion in cotton manufacturing. Mr. Whittam dealt with the subject from the standpoint of the practical manufacturer rather than from that of the merchant, and in conclusion said: "The cotton trade of the world is as yet untouched by us, while we keep on building new mills and enlarging existing ones at a great rate, and meanwhile we are doing practically nothing at all to enlarge our market for the goods made by these additions to our industry.

"Traveling Americans are frequently amused at the crude agricultural implements used by the peons of South America and the agriculturists of the Orient, although the business acumen displayed by us up to the present in the way of protecting ourselves from overproduction is not one iota more advanced than are the crude appliances I have mentioned.

"Ability to produce the goods profitably at level prices, natural advantages, reciprocity treaties, the construction of a canal connecting the Atlantic with the Pacific, ocean shipping under our own flag, international expositions, banking facilities abroad, are all of much importance, and would be materially helpful to us, and we may have all these advantages in the not distant future, but in so far as our own particular welfare is concerned, they will profit us but little unless the man who buys the goods is reached and our wares insistently brought to his notice. Competent salesmen we must have; men with a practical and technical knowledge of the goods they carry, capable also of collecting information bearing upon the peculiar needs of each market visited.

"The trade cannot be reached without expense and systematic effort. Should, however, several corporations syndicate their interests and send out such a man as I have described, the expense would not be heavy for the several members of the combination, and the benefits that would ultimately accrue to them would most assuredly warrant the outlay.

"The South compelled our producers of iron and steel to seek an outlet abroad, and this experience will most surely be repeated in our case. Perhaps we shall move slowly along, suffering our expensive equipment to remain idle for gradually lengthening periods, and in fancied impotency wait for another 'boom;' or, on the other hand, we may, by having our attention forcibly and frequently directed to the 'way out,' adopt the only means of ridding ourselves of the continual and growing menace of overproduction and ruinous competition in the home market.

"The present Pan-American Exposition of the resources of our continent cannot but impress us with the wonderful wealth of our sister republics. I have visited many of them, and have always enquired as minutely as I could into their needs, tastes and capacity as possible users of our cotton textiles.

"We are now by far the most important customer of most of them, purchasing their products freely. Our matutinal cup of coffee, the chocolate we lavish so freely upon our families and many other articles of daily consumption and use are sent to us by our southern neighbors, while they take much of the money with which we pay for these wares of theirs and send it to England, Germany, France and other European countries to buy the cotton fabrics which they wear almost altogether, and which we might just as well send them.

"Their countries are being gradually developed, their purchasing power is increasing from year to year, and we can supply their needs as fully and as cheaply as any other nation. It behooves us, therefore, to make a determined and continued effort to do so, and we shall then enlarge the measure of our own prosperity and can increase the number of our mills without fear of glutting the domestic market."

Other papers on the program were: President's address, by Charles H. Fish, Dover, N. H.; "The Manufacturing Industries: Their Relations to National Position and Progress," by Robert H. Thurston, A.M., LL.D., dean of Sibley College, Cornell University, Ithaca, N. Y.; "The Past, Present and Future of the Cotton Industry in Japan," by Hachiro Fukuhara, Tokio, Japan; "The Plant of the Niagara Falls Power Co.," by Philip P. Barton, Niagara Falls, N. Y.; "The Cotton Fiber in Some of Its Phases," by Henry G. Kittredge, Boston, Mass.; "The Round Bale at the Mill," by W. S. Southworth, Lowell, Mass.; "Overworking of Cotton in the Card Room," by Edward W. Thomas, West Durham, N. C.; "Cotton Waste," by Col. Samuel Webber, Charleston, N. H.; "Thread Boards and Guides," by Lewis T. Houghton, Worcester, Mass.; "Knitting Industry in the United States," by Albert Deabill, Lowell, Mass.; "The Evolution of the Slubbing Frame," by Frank P. Bennett, Jr., Boston, Mass.; "The Abuse of Oils in Cotton Mills," by H. P. Meikleham, Lindale, Ga.; "Steel Forgings for Factory Engines," by H. F. J. Porter, New York city; "Early Southern Cotton Mills," by D. A. Tompkins, Charlotte, N. C.; "Modern Boiler Problems," by Col. E. D. Meier, New York city.

Wants a Cotton Mill.

Mr. R. B. Malsby of Americus, Ga., in a letter to the Manufacturers' Record, says:

"Americus is very anxious for a cotton mill, there being none at that point. Americus is in Southwestern Georgia, in Sumter county, on two lines of railroads. It has a population of 8000 people, gets about 40,000 bales of cotton per year, and there is every reason why a cotton mill should be a handsome investment at this point. If outside capitalists will subscribe $50,000 an equal amount can be raised at once in Sumter county, Georgia, for the erection of a cotton mill in Americus."

Duck Mills to Enlarge.

The Anchor Duck Mill of Rome, Ga., will enlarge its plant. This mill was built during the past year and completed recently. Its equipment is mainly thirty looms and steam-power plant for the production of duck and other heavy goods, its capitalization being $20,000. The improvements mentioned will include the erection of an additional building and the installation of machinery, about $20,000 to $25,000 to be the expenditure. This enlargement will considerably increase the output.

The Cotton Movement.

In his report for September 20 Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, shows that the amount of cotton brought into sight

during the firts twenty days of the present season was 359,986 bales, a decrease under the same period last year of 83,270 bales; the exports were 149,277 bales, an increase of 22,201 bales; takings by Northern spinners 39,023 bales, an increase of 8549; by Southern spinners 95,000 bales, an increase of 18,636 bales.

Southern Cotton Spinners.

The Southern Cotton Spinners' Association has arranged for a meeting at Atlanta in November at which United States Senator John L. McLaurin of South Carolina, United States Senator Albert Beveridge of Indiana, Major J. F. Hanson of Macon, Messrs. Frank H. Hitchcock of the United States Department of Agriculture, Hoke Smith of Atlanta, Sydney B. Paine of Boston and D. A. Tompkins of Charlotte have been requested to speak.

Textile Notes.

The Scotland Cotton Mill of Laurinburg, N. C., is about to contract for five 40-inch revolving flat top cards, and is asking for bids on this machinery.

It is proposed to organize a $20,000 stock company at Greenwood, S. C., for the erection of a cotton-batting mill, and Major T. B. Lee can give information.

The Tifton (Ga.) Cotton Mills Co. has completed its new mill, and expects to be in full operation in another week. The spindles number 5132, and the product is to be thread, and later lace curtains and yarns.

The Wiscasset Mills Co. of Albemarle, N. C., has completed the $2000 school building which it has been erecting. This school is to be equipped and officered for instructing the children of the mill's operatives.

The Durham (N. C.) Hosiery Mills states that it will remove to its new plant about November 1. With the 100 new machines to be added the plant will have a daily output of about 1200 dozen seamless hose and half-hose.

Work is progressing steadily on the new mill for J. A. A. W. Clark and associates at Augusta, Ga. The plant will have 3500 spindles and cost complete about $50,000. The burned plant, which this new one replaces, had 1700 spindles.

The Farmville (Va.) Knitting Mills Co. has leased its plant to Joseph G. Burton of Lynchburg, Va. This plant is new and of modern equipment, and Mr. Burton will continue its operation after installing twenty additional knitting machines. The product is half-hose.

The Kearney (Neb.) Cotton Mills has been sold to the Union Savings Bank & Trust Co. of Cincinnati, Ohio, representing bondholders. The plant has 15,400 spindles and complement of other machinery. It is reported the equipment will be removed to a Southern location.

The Anniston (Ala.) Manufacturing Co. has completed the installation of its new engine and other additional machinery. Operations were resumed this week, the plant having been idle about two months. This is a $250,000 company, operating over 11,000 spindles and 320 looms.

The Mascot Knitting Mills of Sweetwater, Tenn., states that its new building, reported last week, will be a two-story structure 60x100 feet, with boiler and engine houses attached 20x30 feet each. The present plant of sixty-four knitting machines will be doubled when the new building is occupied. The company also states it will probably be interested in a yarn mill, which may be built next spring.

C. P. Brooks, the director of the American Correspondence School of Textiles of New Bedford, Mass., has recently had several courses added to the curriculum of that institution, making eighteen different options which the prospective students now have, and covering all the different branches of cotton-mill, woolen-mill and silk-mill work, together with mill arithmetic and complete courses and partial courses in textile designing. The growth of the school has been remarkable during the past year, as ambitious mill men are realizing the benefits that they derive from receiving a textile education without interfering with their daily work.

Cottonseed-Oil Notes.

The Farmers' Cottonseed Oil Mill and Ginnery was sold at auction last week at Greenville, S. C. The plant was bid in by the Virginia-Carolina Chemical Co. for $21,000.

The Union Cotton Oil Mill of Union, S. C., has been sold to the Southern Cotton Oil Co., and brought par to the stockholders. President W. E. Thompson will continue to run it as manager.

A new cottonseed-oil mill is to be erected at Dawson, Ga. It is said that it will take but a short while to secure the necessary capital. The new company proposes to incorporate with a capital of $25,000. It is proposed to have the farmers largely represented among the stockholders.

Competition among the oil mills for the purchase of cottonseed at and near Brenham, Texas, is at fever heat. The market ten days ago was strong, with sales of cottonseed at $17, and later, it is stated, the Brenham Compress, Oil & Manufacturing Co. purchased 250 tons of seed at $18 per ton. Hulls are selling at $5 per ton.

Cottonseed and its products at Memphis, Tenn., are quoted as follows: Prime cottonseed oil, 31 to 31½ cents per gallon; off crude, 28 to 29 cents; prime summer yellow, 34 cents, and choice cooking yellow, 42 cents; cottonseed meal, per ton, $21, and off, $19 to $19.50; linters, 2½ to 3 cents per pound; cottonseed, including sacks, by river $15 per ton; by rail in bulk, $14.

The plant of the Wharton Oil & Cotton Co. at Wharton, Texas, commenced operations for the season on the 18th inst. The grinding capacity of the mill when running at its utmost power is 100 tons of seed per day of twenty-four hours. For the present the mill will grind sixty tons per day. Beaumont oil is soon to be introduced, furnaces for that purpose being built.

Cottonseed products at Galveston last week were firm, with a slight advance in the price of prime crude oil during the week, the market closing with sales at 31 cents for September, 30 to 30½ cents for October, 29 to 29½ cents for November and 29 cents for December. Holders are firm in their views, and are offering sparingly at these figures. Cottonseed meal is in demand at $22.50 to $22.75 f. o. b. Galveston. Cottonseed cake was easy at $22.50 f. o. b.

The following are the official quotations on cottonseed and cottonseed products as posted at the New Orleans Cotton Exchange on the 23 inst.: Prime refined oil in barrels, 36 cents per gallon; off refined oil in barrels, 35 cents per gallon; prime crude oil, loose, 30 cents per gallon; prime cottonseed cake, $24.50 per ton of 2240 pounds; off do., nominal; prime cottonseed meal, $24 per ton of 2240 pounds; off do., nominal; soap stock, loose, 1 cent per pound; linters, per pound, choice, nominal; A, nominal; B, nominal; C, nominal; cottonseed in sacks delivered in New Orleans, $10 per ton of 2000 pounds; in bulk delivered in New Orleans, nominal per ton of 2000 pounds.

LUMBER.

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

SAWDUST AND ITS USE.

Suggestions About the Utilization of Waste Products.

A problem that confronts many mill men is the accumulation of sawdust. Until recently this was indeed a serious question. Then some bright intellect suggested its use as fuel. Now a great many mills have especially built furnaces for burning the dust. I am going to try in this brief article to suggest a new and profitable use for the refuse called sawdust. In all the larger cities, especially in the East and West, there is a steady demand for something to start the fire with. Every household requires more or less of some inflammable material for this purpose. A great many use kerosene oil, but as this is a dangerous article in careless hands, and the hands of most domestic help are careless, its use cannot be encouraged. The writer knows of several parties in the South who make a regular business of shipping fat light wood in bundles to the Northern markets, and they have found a ready sale for the goods. Now light wood is nothing but pine wood impregnated with the inflammable juices of the pine, namely, tar, rosin, turpentine, creosote and the essential volatile oil called pine oil. Light wood burns fiercely, making a quick and intensely hot flame. The writer has experimented along this line, and finds that by taking sawdust, rosin of a cheap grade and any one of the hydro-carbon oils (though pine oil is cheapest and best), and mixing to a stiff paste, then pressing into sticks about six inches long and one inch in diameter, we get the perfection of kindling wood at a much less cost than even light wood can be furnished.

There is no reason why nearly all sawmills should not convert this waste into a source of revenue. Molds could easily be made on the order of brick molds, and the fat sticks could be turned out at a minimum cost. This applies to pine sawdust. For those mills which confine themselves to cutting hardwoods a wider field is open, namely, the distillation of the sawdust and manufacture of wood alcohol, acetic acid, iron liquor, acetate of lime, etc. The erection of a wood-distilling plant is not as expensive as most people think, and for a few thousand dollars a mill can build a plant and utilize the sawdust that otherwise soon becomes a nuisance.

There are many large mill plants that have taken up this idea with great success, and we believe it will pay any owner who is cutting hardwood to go into this matter at length.

The man who uses to advantage his by-products is the man who succeeds. There are experts who make it their business to find a use for waste products, and they find it exceedingly profitable. The success of such companies as the Standard Oil Co. is due to a large degree to the fact that they utilize everything. Nothing is wasted, and it ofttimes happens that the former waste material proves of as great value as the main product.

THOS. W. PRITCHARD.

Wrightsville, N. C.

Big Plant for Vicksburg.

The extensive lumber firm of George T. Houston & Co. of Chicago, whose mills are located at Bigbee, Miss., and extensive lumber-yards at Cairo, Ill., are extending their enterprises in the South. In a letter to the Manufacturers' Record the firm states that it expects to construct a sawmill and veneer plant at Vicksburg, Miss., the former to include four band saws, one gang and two resaws, the latter to include a complete line of all kinds of modern veneer machinery, with a power plant to include two 1000-horse-power engines and numerous other engines, with battery of boilers sufficient to furnish steam for the combined plant. Messrs. Houston & Co. will have plans completed in a week or two, when they will receive offers from machinery houses on estimates of what the firm will require.

LUMBER MARKET REVIEWS.

Baltimore.

Office Manufacturers' Record,
Baltimore, Md., September 25.

The favorable indications previously noted in the local lumber market continue to show a good substantial volume of trade in many departments of the industry at this and adjacent points. The demand, while not urgent, is steady, and in many respects shows signs of a healthy improvement. From Northern and Eastern sources the inquiry is good, showing a disposition to increase supplies. A favorable outlook for fall and winter trade is the stability of the market for North Carolina pine, receipts of which at this port continue moderate. Advices from all milling sections of Virginia and Eastern Carolina are to the effect that mills are all busy on orders, and stocks somewhat diminished, there being at no time, however, any accumulation. The market for Georgia pine is fairly active, and prices steady, with a good demand for all grades. The hardwood market continues to improve slowly, and it is the opinion of the trade that business will be materially improved during late October and November. At all milling points in West Virginia mills are working up to their full capacity, and the supply of logs in many of the booms will be diminished considerably before the year closes. Oak, poplar and ash are all now in fair demand from furniture manufacturers and other woodworking concerns, and values are a shade better than last week on several grades. The local export trade in hardwoods is still of meagre proportions compared with previous seasons. A few shipments, however, are going forward to European points by each steamer where berth room can be secured, but the total volume of trade in this line is light. The markets abroad hold out slightly better inducements, the demand from consumers being of a more decided character.

Norfolk.

[From our own Correspondent.]

Norfolk, Va., September 23.

Throughout the various channels of the lumber trade of this vicinity there continues to be a most decided inquiry for lumber, and the healthy condition of the market is quite encouraging to manufacturers and commission men generally. The situation in North Carolina pine shows an output about equal to the demand, with stocks only showing slight accumulation. From New York, Philadelphia and Boston the reports in regard to North Carolina pine are very favorable. All arrivals at these points are quickly taken, and under the present demand it is evident that prices will advance. The foreign inquiry is not pressing, and as the markets on the other side are supplied at the moment, shippers are not busy. The demand at home, however, is now engaging the attention of manufacturers, and the present output is being rapidly absorbed by the Northern and Eastern markets. The hardwood trade is in fair shape, and prices well maintained for all desirable stock. Woodworking concerns here are all busy, and a number of new

plants are being established here and at adjacent points. The Wiltz Veneer Co. of Norfolk has been chartered, with a capital stock of $50,000. J. P. Wiltz is president of the company. The Gay Manufacturing Co. of Suffolk will resume control of its mill, which has been leased to the Suffolk Lumber Co. for the past six years. Planing mills here are all exceedingly busy, some running night and day to complete their orders, dressed lumber being in brisk demand. Freights continue steady, with rates unchanged. To New York vessels are chartered at $2.25, and to Boston and eastward $2.75 to $3 per 1000 feet.

Savannah.

[From our own Correspondent.]

Savannah, Ga., September 23.

The shipments of lumber and other wood products has during the present month shown a more than average volume of business. During the past week over 3,000,000 feet of lumber has left this port for New York, Philadelphia and eastward, and the demand at the moment is brisk, with every prospect of a good trade during the fall and winter months. Prices for all grades of Georgia pine are steady, and stocks are being quickly absorbed by weekly shipments. Valuable timber lands throughout the State are in good demand at a sharp advance over last year's figures. Along the various lines of railroad timber land located eight or ten miles from the main line that could have been bought a year ago for $5 to $8 per acre is now selling at $25 to $35 an acre. The crosstie industry is just now very brisk, and the demand from railroads is better than for some seasons past. The shipments of crossties from Brunswick are showing up well, and the lumber trade generally in that section active, with all the mills at St. Simons and nearby points well supplied with orders. There is also considerable foreign business at Brunswick and Darien. Recent charters are a fair index of trade at this and nearby Georgia ports. Last week the following were reported: Schooner E. C. Burk, Savannah to Philadelphia with lumber on private terms; schooner C. W. Dunn, 635 tons, from Brunswick to New London with lumber at $6.25; schooner L. M. Law, 1155 tons, from Savannah to New York or Perth Amboy with lumber and crossties on private terms, and schooner A. M. Porcella, 466 tons, from Savannah or Fernandina to New York with lumber on private terms. A number of vessels recently chartered to arrive to load lumber and crossties are now overdue.

Mobile.

[From our own Correspondent.]

Mobile, Ala., September 23.

There has been more activity during the past week in lumber and timber circles, and shipments continue above the average in volume. The timber market continues very steady, with stocks considerably reduced by recent shipments. Sawn timber is in limited demand at 11½ to 12 cents per cubic foot, 40-foot basis. Hewn timber is in very light supply at 12 to 12½ cents per cubic foot. European advices are unchanged, stocks at all ports being ample for immediate requirements. The London Timber Trades Journal of September 14, in commenting on the pitch-pine trade, says: "There has been no change of consequence since our last report, and at the moment there is very little to record in the pitch-pine market. Stocks at the shipping ports are very much reduced, and were it not for the full supply here and the quiet state of the demand we should look for an immediate advance in prices. At present the stock on this side seems ample to meet the exigencies of trade, as prices for ordinary stuff remain at a very moderate level. For steamer cargoes 50s. is being asked for 35 feet, but we cannot hear of anything on the way. As the shipping season is finished, there is very little to sell, and it will be some weeks before fresh operations at the pitch-pine ports assume an active character." The lumber trade in the Mobile section is fairly active, and mills are all fully occupied on orders for prompt and near delivery. Shipments during the past week amounted to 2,138,414 feet, over 1,000,000 feet going to South America. Among the clearances were the following: Steamer Eastfield for Montevideo, Uraguay, with 1,219,322 feet of lumber and 22,756 cubic feet of sawn timber; steamer Summerhill for Aberdeen with 1377 cubic feet of hewn timber, 103,612 cubic feet of sawn timber and 177,711 feet of lumber; steamer Helsingborg for Dundee with 119,194 cubic feet of sawn timber and 376,000 feet of lumber; steamer Europa for Havana with 125,331 feet of lumber, and schooner Villa Hernando with 238,949 feet. The demand for saw logs is good, and stocks moderate. Freights continue steady, with a moderate offering of desirable tonnage. Charters reported last week are the steamer Basuta, 1839 tons, from Mobile to Rotterdam and Cardiff with timber at 90/, October; British steamer Cairncrag, 1951 tons, from Mobile to Holland with timber at 90/, one port, 92/6 if two, October-November; Norwegian bark White Rose, 1471 tons, from Pensacola to Algoa Bay with timber at 150/, and schooner City of Baltimore, 298 tons, from Pascagoula to Porto Rico with lumber at $8.50 and port charges.

Memphis.

[From our own Correspondent.]

Memphis, Tenn., September 23.

Business in hardwood has been of a fairly satisfactory character. No large orders have been booked, few exceeding two or three cars. The South American trade has been rather disappointing, as has also that with England and the Continent, though there has been a fair business done with South Africa, particularly in dimension stock. The domestic trade has presented no new feature. Red oak, plain, one inch, is in best demand, and moves most readily. Then comes ash, in one, one-and-one-quarter, one-and-one-half and two-inch stock, followed by cypress and the various kinds of oak aside from plain red. All but one of the mills have been running on full time, and there has been some increase in stocks. There is no large accumulation of dry stocks ready for shipment, and the situation is still regarded as healthy. Prices are holding their own so well that buyers show less independence than for some time. Nobody is disposed to shade values. The log supply is not large with some of the mills, though most of the larger mill men here have plenty of timber in sight to engage them for some time. Cottonwood is picking up slightly. Prices, too, are firmer than they were at $17 to $18 per thousand for firsts and seconds and at $12 to $13 for common and culls. The box boards are in especially good call. The various woodworking plants are running at full capacity. The demand for all classes of building materials is phenomenal. The building permits for the second week in September were the largest on record for a similar period in the history of the city. The tight-barrel men are busy with their oil contracts, and the slack-stock manufacturers are kept busy between the calls of the apple men, the flour mills and the sugar refineries.

Lumber Notes.

The Bradley-Ramsey Lumber Co. of Lake Charles, La., started up its saw-mill plant last week, after an eighty days' shut-down for repairs.

R. C. Miller of the Miller Lumber Co. of Shepherd, Texas, sold last week to Jeff Cochran his half-interest in the saw-mill plant for $40,000 cash.

The heading factory and store of V. R. Harris of Erin, Tenn., was destroyed by fire on the 17th inst., the loss amounting to over $3000, with no insurance.

The A. S. Thomas Furniture Co. of Charleston, S. C., has received its charter. Mr. A. S. Thomas is president of the company, and J. B. White, treasurer.

Hughes Specialty Well Drilling Co. of Charleston, S. C., is seeking information concerning lands in South Carolina, Georgia or Florida containing juniper and locust timber.

Receipts of lumber at the port of New Orleans for the week ending September 20 amounted to 1,815,000 feet, and for the season 17,850,121 feet, against 16,300,766 feet last season.

The Cheraw Door & Sash Co. of Cheraw, S. C., has been chartered, with a capital stock of $12,000. The corporators are W. F. Stevenson, D. S. Mattheson and William Godfrey.

The Turner, Day & Woolworth Handle Co. of Louisville, Ky., has purchased the plant of the Turner, Day & Woolworth Manufacturing Co. of that city. The consideration is $40,000 cash.

The Jernigen Lumber Co. of Whitfield, Fla., has been incorporated, with a capital stock of $100,000, to conduct a general lumber business. The incorporators are Albert Jernigen, E. H. Jernigen and H. Jernigen.

The Alabama Cedar Co., in which R. A. Coffey and others of Scottsboro, Ala., are interested, have about completed a cedar slab mill at Hollywood. The plant, when in full operation, will employ about forty-five hands.

The Vaiden Lumber & Furniture Manufacturing Co.'s plant at Vaiden, Miss., was placed in operation on the 17th inst. The factory will make hardwood beds and chamber suits and oak sideboards and a line of kitchen furniture.

Representatives of the Hayward and the Arkansas lumber companies met at Malvern, Ark., last week for the purpose of locating a site for the Hayward Company's mill, and the work of construction will at once be pushed to completion.

One of the largest orders for gum staves ever placed in this country was that recently awarded the Jonesboro Stave & Hardwood Lumber Co. of Jonesboro, Ark., by the Standard Oil Co. for 22,000,000 staves, to be delivered during the coming season.

It is announced that Mr. E. B. Freeman of the Atlantic Coast Lumber Co. at Georgetown, S. C., is to leave for Europe as the representative of this company. Mr. Freeman has been very successful in his office as general manager for the Atlantic Coast Lumber Co.

The large lumber plant and mill of R. Chaffey at Williams, forty-three miles from Cumberland, Md., on the West Virginia Central & Pittsburg Railway, was entirely destroyed by fire on the 17th inst. The plant will be rebuilt at once. The loss is estimated at $9000; partly insured.

The schooner Martha arrived at Houston, Texas, last week with a cargo of mahogany from Mexico. The handling of mahogany direct from the Mexican forests marks a new industry in that section. If the venture proves successful, it is said that a regular line of schooners will be established to ply between Houston and Mexico and Central American ports.

Within the past six months Wigga & Co. of Yorkley, Tenn., have shipped 650,000 feet of poplar lumber to Harris, Cole & Co. of Columbia. The demand for poplar lumber is unprecedented, and dealers find it hard to supply orders. Lumbermen around Lynnville, Tenn., say the prospects are very bright for a good fall trade.

At the annual meeting last week of the Tampa Lumber Co. at Tampa, Fla., the following officers were re-elected for the ensuing year: Hon. Peter O. Knight, president; John T. Moffitt, vice-president and general manager, and Elijah Moffitt, secretary and treasurer. The company is in a flourishing condition and doing an extensive business.

The Greensboro Lumber Co. shipped a car of material to Texas last week comprising colonial columns, doors, sash, stairways, etc., for a handsome residence. The interior work was of quartered oak and of fine workmanship. The company has now on hand a number of orders for interior work on buildings now in course of erection at different points in other States.

The saw-mills and other woodworking industries at Jackson, Miss., are all running on full time, and many of them are unable to keep up with orders. A number of notable deals for timber lands have been consummated during the month, several tracts ranging from 5000 to 40,000 acres having changed hands at good prices. There has been little or no fluctuations in the prices of timber lands during the past year, and available tracts are held at outside figures.

Mr. H. G. Van Orsdel, a prominent lumberman of Lexington, Ky., was in New Orleans recently completing arrangements for the shipping of Central and South American lumber through that port. Mr. Van Orsdel has extensive lumber interests in Guatemala, and shipments to the markets of the United States have heretofore been made by way of New York and Boston. It is his intention to divert the larger portion of this trade through New Orleans.

Hon. Milton Earle, vice-president of the Tennessee Land, Lumber & Mining Co., and E. M. Banes, manager, were at Tullahoma last week making arrangements for beginning operations by the corporation. The company owns valuable tracts of timber and coal lands in Warren and White counties, Tennessee, and will, it is said, erect one of the largest saw-mills in the South, where the lumber will be dressed before shipment. It is the intention of the company to erect later a mammoth manufacturing plant in connection with its business.

At Jacksonville, Fla., there is quite an active business at present in lumber and crossties. A number of vessels are now in port loading lumber and other wood products. Among the vessels clearing last week were the following: British schooner Fred H. Gibson for St. Lucia, B. W. I., with 364,238 feet of lumber, consisting of joists, scantling and planks; schooner John W. Hall for New York with 345,000 feet of lumber. The steamship Roanoke cleared for Philadelphia with 275,000 feet of lumber; steamship Oneida for New York with 150,000 feet of lumber and 2500 crossties among her cargo; the Algonquin with 235,400 feet of lumber and 2500 bundles of doors; steamship Westover for New York with 8500 crossties, and the Seminole for New York with 195,000 feet of lumber and 4000 crossties among her cargo. The Norwegian steamer Vidar entered to load 25,000 crossties to be used in railroad building at Santiago, Cuba. Shipments by other vessels amounted to over 1,000,000 feet.

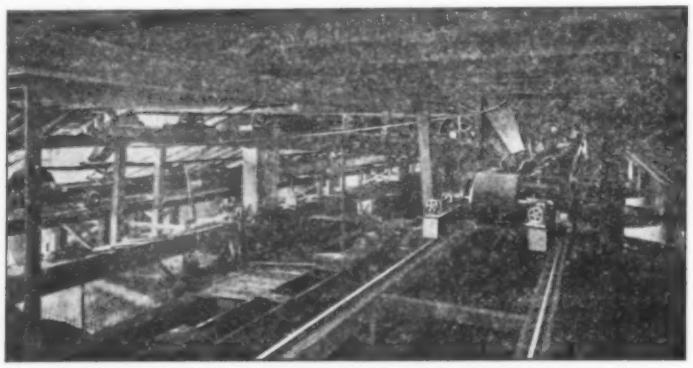
MECHANICAL.

Besly Band Polishing Wheel.

The machine herewith illustrated consists of pedestal, countershaft and spindle to hold either one or two emery band polishing wheels. These wheels are made of

BESLY BAND POLISHING WHEEL.

cast iron. An elastic surface is produced by a felt covering. The emery or other abrasive material is a piece of emery cloth which is tightened firmly around the wheel. To reset the wheel or change the grade of the emery it is necessary only to remove a band and replace it with



CENTURY TRAVELING BELT CONVEYOR.

another, an operation requiring only a minute.

One of these wheels will take the place and do the work of a large number of polishing wheels. The wheels, when used with emery bands, are always perfectly balanced and ready for use. This machine is suitable for shops where skilled polishers are not employed, as well as in those employing skilled labor.

The band grinders are also made with one wheel mounted on spindle, with the other end of spindle suitable for buffing; also with cushioned or with hard surface. Circulars giving full particulars of the grinders will be mailed upon application to Chas. H. Besly & Co., 10-12 North Canal street, Chicago.

Century Traveling Belt Conveyer.

A traveling belt conveyer is a device that will appeal to one at once as possessing superior features for conveying purposes, especially in connection with reduction works and other metallurgical processes, being a simple appliance which will, without the aid of "tripping" contrivances, discharge its load at any desired point along the line.

The illustration herewith shows such a conveyer as made by the Jeffrey Manufacturing Co. of Columbus, Ohio. It consists of the well-known "Century" type of rubber belt, with troughing rolls, the whole affair, with the electric motor that drives it, being mounted on truck wheels, which run on tracks over the line of discharge. This conveyer as shown was installed in a cyanide mill for the reduction of gold ores, and delivers the crushed material to a line of vats, depositing it anywhere along the line, according to the position in which the conveyer is placed. The conveyer is supplied with ore at a point near the center of the line of vats, and is but one-half as long as a stationary conveyer would be with a tripping carriage, as it carries either to the right or the left, the motor being a reversible one to admit of the change. In some cases where the conveyer is a long and heavy one, the truck is made self-propelling, being driven along to the desired location by the same motor that drives the belt. Connection with the motor is provided by a flexible cable or an ordinary trolley line.

In many reduction works the feature of labor-saving devices often represents much of the profit made, and the question of the best methods of economic handling has to be seriously considered. These problems have had much to do with the present perfection to which conveying machinery has risen.

The Monarch Sieve Bolter.

With this issue is described one of the best-appointed as well as up-to-date sieve bolters, which is styled "The Monarch"—equipped with all the latest ideas, best devices and modern appliances. It embraces many features and innovations which make it a model bolter, and in all respects is perfectly arranged for the purposes intended. Its perfect manipulation of stock, convenience, utility and durability are points of advantage which insure its permanence on the market.

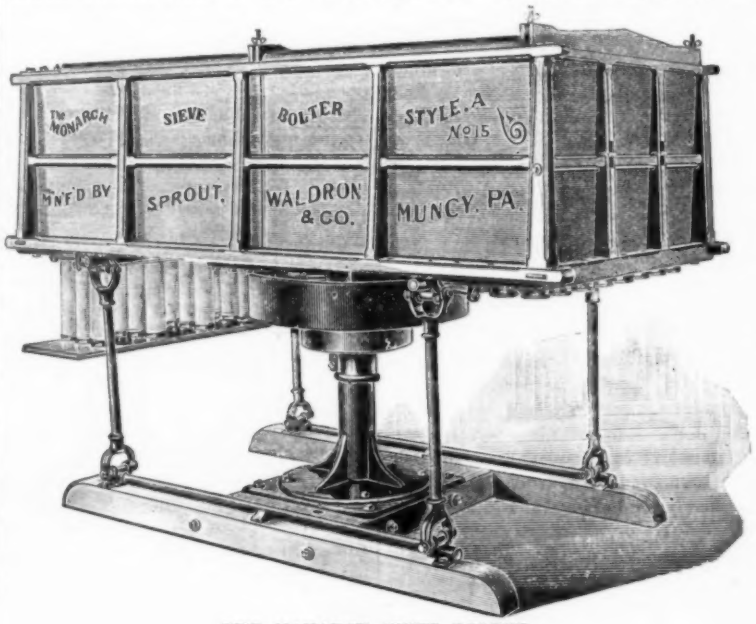
The Monarch Sieve Bolting Machine is built especially to meet the wants of millers who desire a complete bolting system at a moderate cost. It is also designed and can be built to accommodate the exact capacities wanted, and to economize space, power and cost of setting up and operating same. It has all the improvements in the way of automatic brushes for cleaning the cloths, and the latest improved arrangement of sieves, and is supplied with the manufacturers' latest device for balancing the machine, which is invented especially for the Monarch Bolter and fitted exactly to the method of hanging the sieve-box by the equilateral system of hangers. By suspending it from its frame from joists above or supporting it from the base by the equilateral system of struts, it is not necessary to have a frame, yet it is driven by but one crankpin. The great advantage of only one pin is readily perceived, as it maintains the same perfect motion throughout all its bolting surface, gives the box entire freedom to move in any direction, and prevents any jump or jar, either of which causes the stock on the sieves to flow irregularly, thereby lessening the capacity and sometimes causing the stock to refuse to go the direction intended; also causing chokes on the machine.

The equilateral system of hanging or supporting the sieve-box is based on the idea of a universal joint, but it is universal only when all four of the points of support move exactly alike, consequently whenever the crankpin moves the box all parts move the same and the ends of the box cannot sway and throw the box out of line with the frame. It is kept at all times and at every point of its orbit parallel with the frame or base. When struts are used the effect is the same, the box in both instances being kept square with base or frame by the equilateral adjustment. At the same time it is perfectly free to move exactly in the circle of the driving pin and no weight of the box rests on this pin, all being carried by the struts or hangers.

The flywheel is perfectly balanced by three heavy movable weights, and the upright shaft is carried by the tall central pedestal, which imparts little or no vibration to the building or floors. Perfect balancing adjustment is obtained by means of three adjusting screws, the weights being accurately placed so there is no side or lateral vibration, and no jar or motion can be felt at top box of pedestal. The greatest strain on pedestal is that of the pull of the two-and-one-half-inch belt used in driving machine.

The newest and latest arrangement of sieves furnishes a large amount of cloth surface, which is a strong feature. In addition to a scalping and grading cloth, it has over eighteen feet in length of flour cloth for stock to travel over, insuring a complete finish to all the product. It has a perfectly automatic cloth cleaner, which is very positive and works on under side of silk, keeping all the cloth entirely clean, allowing it to be used to the very best advantage all the time, and requiring no attention.

The machine can be built in all sizes and in three different styles; it can be suspended from floor above or supported on struts below; it runs smoothly and noiselessly, requires very little power to operate, and is easily installed. The Monarch Sieve Bolter has been on the market for over six months, and has proven all that is claimed for it. The minutest inspection of this machine is invited, and those desiring prices or information in reference to same are requested to write the manufacturers, Sprout, Waldron & Co., Muncy, Pa., who build the Monarch flouring-mill machinery, and who will take pleasure in mailing their illustrated catalogue describing the same.

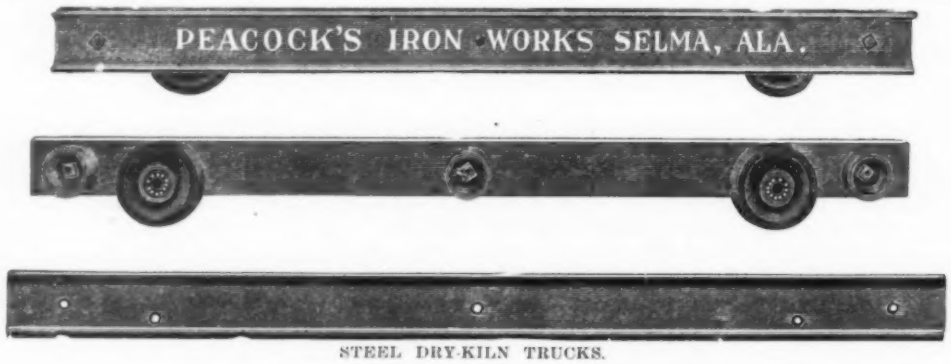


THE MONARCH SIEVE BOLTER.

Steel Dry-Kiln Trucks.

The illustration gives an idea of the Roller-Bearing, Anti-Friction Steel Dry-Kiln Trucks manufactured by the Peacock's Iron Works, Selma, Ala. These trucks are having an extensive sale throughout the South, and are being used in nearly all of the leading mills of the country on account of their superiority. They are manufactured in all sizes from 18 inches to 7 feet in length, and are made of the finest channel steel. They are not affected by heat, cold or dampness, and do not warp or break either in or out-side of the kiln. They are lighter than wood, and are shipped set up ready for use. Their carrying capacity is guaranteed to be three times their actual requirement. Every part is composed of steel except the wheels and spreaders, which are iron. The axles and roller bearings are made of the finest finished steel. The company offers to send a set of the trucks to responsible parties, and if not found satisfactory will pay the freight charges one way. As a matter of fact, however, the trucks are so satisfactory that they are never returned.

This concern manufactures all kinds of

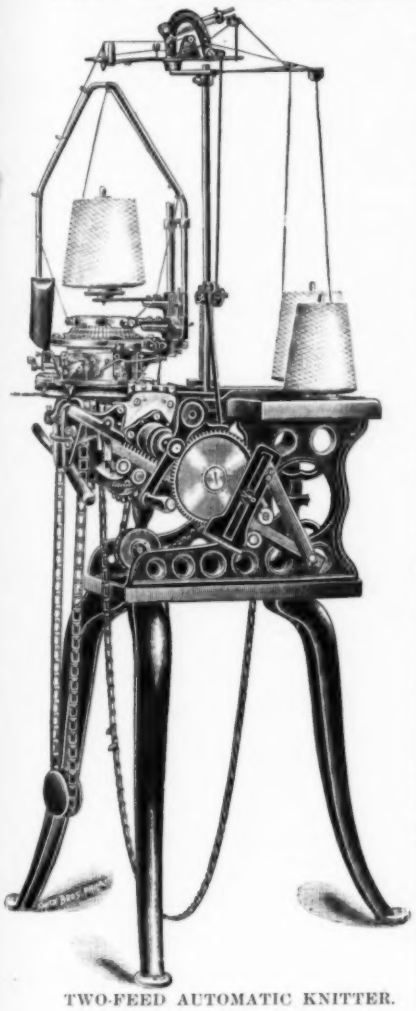


STEEL DRY-KILN TRUCKS.

small cars for mines, logging, construction, carrying sugar-cane, etc., as well as dump cars of all sizes and kinds; also live rolls of all sizes, lengths and styles, sawdust and plain grate bars, lumber trucks, dolley wheels, etc. Further particulars and prices relative to the trucks or other equipment will be cheerfully furnished. Correspondence is solicited.

Two-Feed Automatic Knitter.

One of the most notable improvements recently made in knitting machinery is



TWO-FEED AUTOMATIC KNITTER.

shown in the Two-Feed Automatic Knitter illustrated herewith. It is built for ladies' hose or string work, and tests made at the works of the manufacturer—the Excelsior Knitting Machine Manufacturing Co. of Allentown, Pa.—show some remarkable results. On 3¾-inch diameter, 188 needles, one operator with six machines produced thirty dozen in ten hours running at the rate of 250 revolutions per minute. It may be stated that while running on the leg at this speed with the two feeds it is equal to 500 revolutions on single feed, so that really under these conditions six of the machines are equal to ten or twelve single-feed automatic machines.

Some of their advantages are: The difference between the cost of six two-feed and ten or twelve single-feed machines; the difference in the amount of seconds produced, because the operator has less machines to take care of; less floor space required, thereby enabling the manufacturer with the same floor space and number of machines to increase his production by two-fifths; practically no more power required for the increased production; the percentage of repairs no more on the increased production, but practically less per dozen. The last, but by no means least advantage is that one operator has from four to six machines less to care for, as the knitter turns out the work so rapidly, thus compelling the operator to give close attention and insuring better work. On the seven-eighths automatic machine the operator sees each stocking twice during its knitting, and cannot fail to note any defect in same. Should any occur, the machine would at once be stopped and the bad needle removed, while on another machine the bad needle might not be noticed until quite a number of stockings had been made only fit for "menders" or waste.

The illustration is of the two-feed apparatus, which embodies all the features of the seven-eighths automatic machine, and is also adapted for the manufacture of ladies' black hose with white feet.

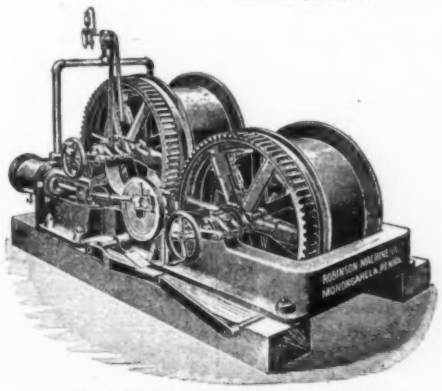
This company is also about to place on the market a four-color striping machine for half-hose and ladies' hose. It has already built about 150 during the last year. They have been running successfully, with an average production of four dozen half-hose to a machine, one operator caring for three machines.

Improved Hoisting Engine.

Mining companies, contractors and users of hoisting machinery generally are well aware of the merits of the apparatus constructed by the Robinson Machine Co. of Monongahela, Pa. In this issue is illustrated one of its specialties—the double-drum friction-clutch tail-rope engine. As will be noted in the engraving, the drums are set tandem.

The engines are of the most modern design, and are built massively and strongly. The drums have cast-iron flanges, with body of steel boiler plate riveted to the flanges. The brake operates on the outer side of a flange cast to the drum, on the under side of which the clutch operates. The clutch is of umbrella type; the grips are turned and covered with vulcanized paper, which makes a very durable clutch, and one easily repaired when worn. The clutch grips slide in and out of channels in the gear-arms. This relieves the drum-shaft and gear-hub of torsional strain. The levers and handles are in easy reach of the operator without change of position.

The engine bed-plates are cast in one piece, and contain the pillow-blocks for both engine-shaft and drum-shaft. The forward drum, with its frame, is detachable, making a single-drum machine when so detached. The engines are designed for either steam or compressed air, and electric motors can be attached when so desired. These machines are now being used very extensively in mines where the haulage is difficult and tedious, especially



IMPROVED HOISTING ENGINE.

where the grades are heavy and the entries long.

The entire machine is bolted to a heavy pair of timbers, and to erect in the mine no foundation is necessary. The floor is cleared, the machine set up in position, and four posts, one on each end of the timbers, secure the apparatus in place.

The engine represents the very latest improvements, and has found favor wherever used, owing to the results obtained by it. The company will be pleased to give additional information and to quote prices to anyone interested.

PHOSPHATES.

Phosphate Markets.

Office Manufacturers' Record,
Baltimore, Md., September 25.

A moderate demand for phosphate rock has been the rule in the local market during the week, and there has been a steadier tone to values shown in recent transactions. At various points in the Southern phosphate belt everything relating to the industry is moving along steadily, and miners making the most out of their deposits. In Tennessee the situation is looked upon as more favorable than for some time past, and the discoveries now making for prospectors show that properties included in the proposed deal are much more valuable than at first supposed. The demand for export rock is improving, and quite large shipments to domestic centers have been made during the past week. Prices throughout the list continue firm, and holders not anxious to offer in large lots at present values. The Florida phosphate market is now showing a very steady tone, and the movement of both land rock and pebble from the ports is more active than last month. Some of the larger companies, notably the Dunnellon Phosphate Co., which is opening up its mines near Dunnellon, are preparing for an increased output during the fall and winter months. There is a fair inquiry from abroad, but miners are not disposed to make long-time contracts at present prices. The industry in South Carolina is now being developed with some of the old-time enterprise, and operations of the Coosaw and other companies are expected to bring good results. The foreign demand for South Carolina rock is improving. Among the charters for the week were the schooner W. C. Tanner, 879 tons, from Tampa to New York, and steamer Morgan from Fetteressa to Elizabethport, N. J., with phosphate rock, both on private terms.

Fertilizer Ingredients.

The market for leading ammoniates has been steady during the week, with a better demand for future delivery. Sulphate of ammonia is firm for all positions. There has been more inquiry for blood and tankage. Nitrate of soda is steady.

The following table represents the prices current at this date:

Sulphate of ammonia (gas)...	$2 72½@ 2 75
Nitrate of soda, spot Balto....	1 85 @ 1 90
Blood	2 25 @ 2 27½
Azotine (beef).....	2 35 @ —
Azotine (pork).....	2 35 @ —
Tankage (concentrated).....	2 17½@ 2 20
Tankage (9 and 20).....	2 20@ 2 25 & 10
Tankage (7 and 30).....	20 00 @20 50
Fish (dry).....	26 00 @27 00

Phosphate and Fertilizer Notes.

The total shipment of phosphate rock from Mt. Pleasant, Tenn., over the Louisville & Nashville Railroad for the month of July amounted to 28,181 tons.

It is understood that the International Kaolin Co. will soon begin work on its plant at Yalaha, Fla. Building material is being delivered, and it is the intention of the company to push the work on the plant to completion.

The Norwegian steamer Drot cleared from Savannah, Ga., last week for Kartrup via Baltimore with 3150 tons of high-grade Florida phosphate rock, valued at $31,250.

The Dunnellon Phosphate Co. at Dunnellon, Fla., is beginning to open up its mines. The Rockwell plants will start up shortly, and will be worked with a good force of hands.

The Austrian steamship Oquileja from Port Tampa, Fla., with 2000 tons of phosphate rock in transit for Venice arrived at New Orleans on the 15th inst. and will fill out her cargo for Trieste.

An important deal in phosphate lands was made last week at Columbia, Tenn., Miss Amanda Carter selling her farm of 243¾ acres near Carter's creek to the Tennessee Valley Fertilizer Co. for $36,585, or $150 per acre. This company, it is said, has since sold the property to the Virginia-Carolina Company for $39,000.

The Florida Drug Co., recently incorporated, will make Jacksonville, Fla., the distributing point for the entire State of Florida and adjacent islands and Southern Georgia. The company is capitalized at $100,000. W. H. Monk is president and manager; W. O. Yeiser, vice-president and treasurer, and F. S. Chaffee, secretary.

Messrs. W. G. Sadler, Robin Jones and William Rich have leased the phosphate lands and property of the Duck River Phosphate Co. in Hickman county, Tennessee, nine miles from Centreville. These parties, it is stated, will organize a company to be known as the Union Phosphate & Railroad Co., lessee of the Duck River Phisphate Co. The company will control the railroad from Centreville to the mines, which will also give it control of the upper Swan creek property.

Expanding Little Rock.

Mr. George R. Brown, the alert secretary of the Board of Trade of Little Rock, Ark., is circulating a mass of literature showing the increasing importance of that city. During the past twelve months the receipts of cotton were 205,129 bales, an increase of 80,573 bales, and the shipments 187,414 bales, an increase of 50,252 bales. The receipts of cottonseed were 3122 carloads, an increase of 600 carloads. Little Rock shipped 1055 carloads of cottonseed meal, 598 carloads of hulls and 426 carloads of oil. The local freight traffic showed a marked increase over the preceding year. The receipts were 46,243 carloads, an increase of 4401 carloads, and the shipments 28,530 carloads, an increase of 4382 carloads, or a total increase of receipts and shipments of 8783 carloads.

Marine Works at Norfolk.

Work has been started at Norfolk on a marine railway, machine works, boiler shops, saw-mill and woodworking department, equipped with modern apparatus and machinery for repairing marine craft. It is the intention to add the construction of tugs, schooners and kindred vessels. The railway will accommodate a 1000-ton vessel; its groundways will extend 550 feet into the water, where a depth of twenty to twenty-five feet is had. Messrs. Fred O. Smith and Geo. W. McCoy, proprietors of the Southern Iron Works at Berkley, Va., are building the new plant, and will operate it.

The Richmond Pattern Works at Richmond, Va., makes a specialty of patterns for machinery of all kinds, and has already secured some extensive orders.

CONSTRUCTION DEPARTMENT.

THE MANUFACTURERS' RECORD seeks to verify every item reported in its Construction Department by a full investigation and complete correspondence with everyone interested. But it is often impossible to do this before the item must be printed, or else lose its value as news. In such cases the statements are always made as "rumored" or "reported," and not as positive items of news. If our readers will note these points they will see the necessity of the discrimination, and they will avoid accepting as a certainty matters that we explicitly state are "reports" or "rumors" only. We are always glad to have our attention called to any errors that may occur.

*Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery Wanted."

In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the Manufacturers' Record.

It often occurs that the organization of a new company in a town is not known by the postmaster, and hence letters addressed to the company are returned marked "not known." The Manufacturers' Record reports the first organization of all companies, and our readers, in seeking to get into communication with them, should be very careful in deciding how to address them, and it is often advisable to add the names of one or more incorporators as an aid to the postmaster in delivering mail.

ALABAMA.

Avondale—Ice Factory.—Avondale Ice Factory, owned by Birmingham Ice Factory Co., has been burned, at a loss of $40,000, and will be rebuilt at once. Capacity will be doubled, making a 60-ton plant.

Bessemer—Wheelbarrow Factory.—It is said that W. B. Newbegin of Bluemound, Ill., and others will build wheelbarrow factory.

Birmingham—Piano Company.—Robert L. Seals and John D. Chichester have incorporated Seals Piano & Organ Co., with capital stock of $25,000, for dealing in musical instruments.

Birmingham—Drug Company.—J. T. Dorster, N. E. Senn, Samuel Earle and W. A. Davis have incorporated Dorster Drug Co., with capital stock of $50,000.

Birmingham—Mining.—W. C. Brown and M. H. Amerine have incorporated Midvale Mining Co., with capital stock of $100,000, for mining minerals of all kinds.

Hartselle—Oil Mill and Ginnery.—J. C. Hartselle & Son are now erecting the ginnery reported last week. It will have capacity of fifty bales daily. Firm also contemplates installing cottonseed-oil mill next season.*

Hollywood—Slat Mill.—Alabama Cedar Co., in which R. A. Coffey of Scottsboro, Ala., is interested, has about completed a cedar slat mill at Hollywood.

Huntsville — Carriage Factory.—Michigan parties are investigating with a view to removing their carriage factory to Huntsville. Address Chamber of Commerce.

Huntsville — Crematory. — It is reported that garbage crematory will be erected. Address Alfred Moore, mayor.

Sheffield—Machine Shops.—Southern Railway Co. will remove its shops from Memphis, Tenn., to Sheffield.

Wetumpka—Cotton Mill.—A. J. Milstead, Drew Milstead and F. D. Milstead of Tallassee, Ala., are reported as to erect a cotton mill at Wetumpka.

ARKANSAS.

Eldorado.—Chartered: R. A. Faulkner & Co., with capital stock of $20,000, by R. A. Faulkner (president) and others.

Green Forest—Gas and Oil Wells.—Green Forest Oil & Gas Co. has been incorporated, with capital stock of $25,000, and G. M. Wallace, president; W. A. Butt, secretary, and A. J. Russell, treasurer.

Mansfield — Lumber Company.—Mansfield Lumber & Mercantile Co. has been incorporated, with capital stock of $40,000, by W. L. Seaman, president; Geo. C. Packard, vice-president; A. E. Peer, secretary and treasurer.

Paris—Fuel Company.—Chartered: Union Fuel Co., with capital stock of $50,000, by J. J. Smith, W. S. Nesbt, G. M. Zeller and others.

Pine Bluff—Furniture Company.—Bradford Furniture Co. has been incorporated, with capital stock of $20,000, to continue the business of Bradford & Knox. L. O. Knox is president.

Pine Bluff — Supply Company. — Incorporated: J. J. W. Smith Co., capital stock $5000, with J. J. W. Smith, president, and R. W. Goodwin, secretary.

Plumerville.—Chartered: Ferris & White Co., with capital stock of $10,000, by W. C. Ferris (president) and others.

FLORIDA.

Jacksonville — Brick Works. — Chartered: Jacksonville Brick Co., with capital stock of $25,000.

Milton—Rice Huller and Gin.—S. H. Collins has purchased and will operate rice huller and cotton gin complete.

Milton—Artesian Well.—Contract has been awarded for sinking eight-inch artesian well to Hughes Specialty Well Drilling Co. of Charleston, S. C.

Pensacola—Oil Wells.—A stock company with capital of $1,000,000 has been organized, with J. Ernest Baars, president; H. Baars, vice-president, and J. Ed. O'Brien, secretary and treasurer, for the purpose of boring for oil.

Plant City—Brick Works.—Davis Brick Co. will install additional machinery. Contracts have been placed.

Punta Gorda—Ice and Fish-freezing Plant. It is reported that Philadelphia parties represented by a Mr. Corell will erect an ice and fish-freezing plant to cost $400,000 in Punta Gorda. A. P. Jordan may probably give information.

Tampa—Brick Works.—Davis Brick & Tile Co. will enlarge its works.

Wauchula — Packing-house. — Altman & Maddox are building new packing-house.

Whitfield — Lumber Company. — Jernigan Lumber Co. has been incorporated, with capital stock of $100,000, to conduct general lumber business, by Albert Jernigan, E. H. Jernigan and H. Jernigan.

Yalaha—Kaolin Plant.—International Kaolin Co. will soon begin work on erection of its proposed plant.

GEORGIA.

Dawson—Oil Mill.—A company with capital stock of $25,000 is being organized to build a cottonseed-oil mill.

Dublin—Telephone System.—A. I. Smith has been granted franchise to establish telephone exchange, etc.

Jasper—Silica Quarry.—Thos. J. Coen of Chicago, Ill., and Capt. S. C. Rhodes of Blue Ridge, Ga., will erect roller mill at their silica quarry near Jasper to grind and sack silica for market. Mr. Coen is also inspecting a silica quarry at Mineral Bluff, Ga.

Marietta—Nursery.—Incorporated: Gober Nursery Co., by P. T. Hamby and W. M. Gober, to cultivate fruit trees, etc.

Rome—Planting, etc.—W. M. Towers, F. B. Freeman and others have incorporated the Towers-Freeman Orchard Co. for planting and propagating fruit trees, etc. Capital stock is $25,000, with privilege of increasing to $100,000.

Rome—Cotton Mill.—Anchor Duck Mill will erect an additional building and install more machinery, expending about $25,000; now has thirty looms and uses steam-power.

Statesboro — Storage.—Statesboro Storage & Commission Co. has been incorporated, with capital stock of $10,000.

Thomasville—Bobbin and Shuttle Factory. Thomasville Bobbin Works has been organized, with C. M. Smith, president, and E. H. Smith, secretary-treasurer, to manufacture bobbins, shuttles, etc. Capital stock is $10,000.

Willacoochee—Gin-machinery Works.—H. Peterson, E. L. Peterson and Jefferson Wilcox have formed a partnership to manufacture an improved long cotton gin roller.

KENTUCKY.

Albany—Gas and Oil Company.—E. M. Shelby of Burnside and others have organized Koger Oil & Gas Co., with capital stock of $20,000.

Berea—Oil Wells, etc.—Berea Oil & Gas Co. has been incorporated, with capital stock of $25,000, to develop for oil, etc., by C. M. Rawlings and W. E. Higginbotham of Berea, John F. White and W. S. Hunley of Richmond, and others.

Burnside—Oil Wells.—Antioch Oil & Gas Co. has been organized, with J. L. Grisson, president; W. R. Reid, secretary, and A. C. French, treasurer.

Frankfort — Cooperage. — Incorporated: Hume Cooperage Co., with capital stock of $100,000.

Junction City—Oil Wells.—Closser & Ward of Lima, Ohio, will drill for oil.

Louisville—Mercantile.—Chartered: A. Englehardt & Sons Co., with capital stock of $100,000, by Albert Englehardt, Peter J. Schlicht and others.

Louisville—Molasses Company.—Chartered: Botts-Young Molasses Co., with capital stock of $15,000, by J. A. Botts of New Orleans, La.; G. C. Jones and others.

Louisville.—Chartered: Produce Jobbers' Association, with capital stock of $30,000, by E. H. Bowen and others.

Louisville — Wagon Factory. — McCallum Steel Wagon Co. of Chicago, Ill., states that the report of its removal of factory to Louisville, mentioned last week, originates in the fact that it does contemplate a removal to some Southern point, but a definite decision has not been reached yet. Plant would employ 250 men, with daily output of about fifty vehicles.

Mayking—Oil Wells.—C. C. Mayo of Paintsville (representing Standard Oil Co. of New York city) has leased lands on which to drill for oil.

Mt. Sterling—Flour Mill.—Shout & Co. will build flour mill.

Paintsville—Coal Mines.—Mayo Coal Co. has been organized, with John C. C. Mayo, president, for development of coal mines. Capital stock is $25,000.

Somerset—Oil Wells.—Somerset Oil Co. has reorganized and chartered under Dakota laws, with capital stock of $1,200,000, and O. H. Waddle, president; R. Kolker, secretary-treasurer, and John A. Geary, general manager. Company has two producing wells of 12,000 barrels per month, and is drilling others.

LOUISIANA.

Crowley—Irrigating Canals, etc.—P. B. Lang, John Green, J. F. Shoemaker and others have incorporated the Crowley Farming Co., with capital stock of $100,000, for constructing and operating irrigating canals and cultivating lands.

Lobdell—Cotton Gin.—Kahn & Kahn will probably rebuild their cotton gin, reported burned.

New Orleans—Pottery.—Newcomb Memorial College will erect two-story building to be equipped as a pottery; B. V. B. Dixon, president.

Ruston—Furniture Factory.—Arkansas parties are investigating with a view to removing their furniture factory to Ruston and enlarging same to a $20,000 plant.

Shreveport — Telephone System. — M. D. Shaw and associates have been granted franchise for constructing and operating telephone system.

MARYLAND.

Baltimore—Real Estate.—Security Real Estate Co. has been incorporated, with capital stock of $35,000, by Lester L. Stevens, Geo. C. Morrison and John W. Beebe.

Baltimore — Tobacco Factory. — American Tobacco Co. has accepted plans from J. E. Laferty for $25,000 addition to factory; structure to be nine stories high, 56x67 feet, of buff brick, trimmed with granite, iron columns and girders to support floors, maple flooring, etc.

Cumberland—Bakery.—D. H. Lear has had plans prepared for three-story business building and bakery to cost $8000.

Kensington—Gas Plant.—Walter B. Clay and J. F. Tilley, Jr., of Washington, D. C. (representing New York parties), have franchise for gas lighting and will construct acetylene plant at a cost of $12,000.

MISSISSIPPI.

Greenville—Sewerage System.—City has voted affirmatively on the proposed issuance of $50,000 in bonds to construct sewerage system.

Hill City—Oil Mill.—Incorporated: Hill City Oil Works, capital stock $50,000, by W. L. Stoutz, F. P. Fox and T. M. Smedes, for manufacturing cottonseed oil, etc.

Laurel—Bottling Works.—R. H. Raplee and C. E. Newcomer have incorporated Laurel Bottling Works, with capital stock of $10,000, for manufacturing and bottling soda water, etc.

McComb City—Mercantile.—D. C. Easley and others have incorporated the McComb City Mercantile Co., with capital stock of $50,000.

Meridan — Mercantile. — Incorporated: Thomas & Co., capital stock $60,000, by A. J. Thomas, W. W. Thomas, A. H. Daghdrill and others.

Meridian—Milling.—John Kamper Milling Co. has been incorporated by John Kamper, E. A. Slaughter, C. W. Robinson, T. L. Wall and P. D. Neville; capital stock $60,000.

Sardis — Water-works.— Granbery Jackson of Nashville, Tenn., has been engaged by the city council to design and construct the system of water-works recently mentioned, for which $15,000 is available.*

Vicksburg—Fuel and Oil Company.—Chartered: Vicksburg Fuel & Oil Co., with capital stock of $50,000, by I. R. Deerdeyn, John Curphey, T. N. Smedes and others.

Vicksburg—Lumber Mills.—Geo. T. Houston & Co., corner Twenty-second street and Center avenue, Chicago, Ill., will construct saw-mill and veneer mill at Vicksburg, as recently reported; former will include four band saws, one gang and two resaws, and the latter a complete line of all kinds of veneer machinery, with power plant to include two 1000-horse-power engines and a number of other engines, with battery of boilers to furnish steam for entire plant; completed plant to employ over 500 men.*

MISSOURI.

Harviell—Stave and Lumber Mill.—Chartered: Mangold Stave & Lumber Co., with capital stock of $100,000, by John Mangold, Sam W. Foster, John Hooks and others.

Joplin — Separating Company. — Magnetic Separating Co., with capital stock of $100,000, has been incorporated by W. P. Cleveland, C. E. Knowls, James Campbell and others.

Joplin—Mining.—Incorporated: Little Giant Mining Co., with capital stock of $5000, by Arthur Miller, J. A. Gray and B. A. Rood.

Macon — Publishing. — Chartered: Macon Publishing Co., with capital stock of $10,000, by Thos. E. Wardell, Harry M. Rubey, M. E. McCullough and others.

Rich Hill—Development Company.—Incorporated: Southwestern Development Co., capital stock $300,000, by H. Loeb, C. R. Walters, Thomas McComb and others.

Slater—Electric-light Plant.—Town is reported as to install electric-light plant. Possibly "Town Clerk" can give information.

St. Louis — Manufacturing.—Incorporated: Duplex Manufacturing Co., capital $2000, by E. Boulanger and others.

St. Louis—Electric Plant.—Citizens' Electric Light & Power Co., Julius S. Walsh, president, is preparing to build its proposed electric-lighting and power plant; company organized several years ago with $3,000,000 capital stock; Chas. H. Ledlie, general manager and engineer.

St. Louis—Printing.—A. R. Deacon, A. W. Lambert, R. T. Deacon and others have incorporated the Lambert-Deacon-Hull Printing Co., with capital stock of $50,000.

NORTH CAROLINA.

Cumnock—Coal Mines.—The facts regarding the reopening of the Cumnock coal mines, mentioned last week, are that the Chatham Coal & Iron Co. has been organized and purchased the property. This is not the old company of same title which operated, but did not own, under a West Virginia charter. Improved modern machinery is being installed, and a daily output of 600 tons will soon be obtained by the improvements. Early next year this company will open several more veins and increase to a daily output of 2500 tons. H. K. Myers (late with Baldwin Locomotive Works at Philadelphia) is president and general manager.*

Faith—Gold Mines, etc.—J. T. Wyatt has been engaged to report on cost of pumping out and retimbering the Pioneer mines for prospective purchasers. Gold, copper and silver has been developed.

Greensboro — Electric-light Plant. — Gate City Furniture Manufacturing Co. will install electric-light plant.*

Henderson—Clothing Factory, etc.—Johnson Furnishing Co. has been incorporated to manufacture and deal in clothing, underwear and knit goods; incorporators, B. G. Jones, B. F. Johnson, V. E. Smith and others; capital $2500.

Laurinburg—Cotton Mill.—Scotland Cotton Mill will install five 40-inch revolving flat top cards.*

Lexington—Cotton Mill.—Wennonah Cotton Mills will erect an addition to enlarge its engine-room and lapper-room.

Louisburg—Sewerage and Water-works.—City will hold an election October 8 to decide issuance of not more than $30,000 of bonds for sewerage and water-works; W. H. Macon, mayor.

Maxton—Coffin Factory.—D. W. Townsend contemplates establishing a coffin factory.*

Morganton—Gold Deposits.—Dr. J. E. Warren of Philadelphia, Pa., is installing $15,000 dredge for washing deposits in bed of Catawba river for gold.

Ore Knob—Copper Mines.—Ore Knob Copper Co., reported last week as to reopen its mines, has for its president L. H. Werssleder, 34 Wiggins Block, Cincinnati, Ohio, who can give information to inquirers.

Rocky Mount—Supply Company.—Rocky Mount Supply Co. has been organized by C. Braswell, M. R. Braswell, J. D. Odom and others, with authorized capital of $100,000; company will erect structure containing four two-story brick buildings.

Rocky Mount—Sash and Blind Factory.—Rocky Mount Sash & Blind Co. will increase its capital stock $50,000.

Siler City—Woodworking Factory.—Hadley-Peoples Manufacturing Co. contemplates building a factory for manufacturing hames, singletrees and plow handles.*

Wake Forest—Ice Factory, etc.—Wake Forest Market Co. has been incorporated for the manufacture of ice and to conduct a market; capital stock is $50,000 and incorporators are George Gill, W. B. Rivenbark, J. B. Carlyle, W. C. Brewer and others.

Washington—Iron Works.—G. T. Hardy, F. B. Hooper and P. M. Moriarty have bought Pamlico Iron Works, and will operate same.

Waxhaw—Drugs.—The New Drug Store has been incorporated, with capital of $2000, with C. Brown, president, and D. A. Davis, manager.*

SOUTH CAROLINA.

Abbeville—Flour Mill.—It is rumored that E. Long will build a flour mill.

Batesburg—Electric Lighting.—The town has altered its charter in order to provide for securing electric lights. Address "Town Clerk."

Cheraw—Door and Sash Factory.—Cheraw Door & Sash Co. has been chartered, with capital stock of $12,000, and N. T. Cobb, president and treasurer, and Harry Godfrey, secretary.

Florence—Ice Factory.—Florence Ice & Fuel Co. will install 25-ton ice plant, not 15-ton, as previously reported.

Greenwood—Cotton-batting Mill.—Major T. B. Lee can give information regarding the organization of a $20,000 company for erection of a cotton-batting mill.

Mt. Pleasant — Lumber Mill. — Atlantic Coast Lumber Co. of Georgetown is reported as to build a branch mill.

TENNESSEE.

Chattanooga — Saddlery.— Globe Saddlery Co. will make improvements to its plant.

Clarksville—Iron Mining, Manufacturing, etc.—Red River Furnace Co. has been organized, with capital stock of $200,000 and Graham Macfarlane, president; H. R. Williams, vice-president, and R. B. Hickman, secretary, all of Louisville, Ky. Company will acquire properties of Red River Iron Co. and of Clarksville Furnace Co., including 1500 acres of iron-ore lands, limestone quarries, Helen furnace, etc., and will extensively mine and manufacture iron. About $50,000 is now being expended on new plants and improvements to the furnace.

Clifton—Oil Wells.—Clifton Oil Co., recently organized with capital stock of $25,000 and W. S. Duckworth of Nashville, president, has secured leased on 10,000 acres of lands contiguous to Clifton, and will sink two, and probably three, test wells at once.

Cookeville—Flour Mill.—Cookeville Roller Mill Co. has been incorporated, with capital stock of $7500, by J. F. Slagle, J. T. Bullock, P. C. Farley and others.

Crossville—Coal Mines, etc.—Meads Gap Coal & Coke Co. has been incorporated, with capital stock of $50,000, by B. F. Wilson, W. H. Crawford, John W. Staples, John M. Gray, Jr., R. M. Dudley and W. C. Collier.

Gallatin—Oil and Gas Wells.—C. Levy, D. F. Barry, S. M. Anderson and others have incorporated the Cumberland Oil, Gas & Mineral Co., with capital stock of $10,000.

Jackson.—Chartered: Oliver-Finnie Company, with capital stock of $10,000.

Jellico—Oil Wells.—Jellico Oil & Pipe Line Co. has been incorporated, with capital stock of $25,000, by Jeremiah Smith, E. S. Jameson, S. V. McComb and others. Leases have been secured, and test wills will be sunk at once.

Knoxville—Iron and Steel Plant.—Knoxville Iron Co. is now consulting with its engineer in reference to construction of the proposed iron and steel plant to cost $450,000, previously reported. The iron works are to be built first and the steel plant erected later. The site has been bought; it comprises twenty acres. T. I. Stephenson is manager.

Lafollette—Iron Foundry.—It is said that the foundry mentioned last week will be built at once, and that it will cost $60,000. Lafollette Coal, Iron & Railway Co. can give information.

Nashville — Mineral Company.—Chartered: Tennessee & Alabama Oil & Mineral Co., capital stock $150,000, by J. T. Oakes, N. A. Crockett, T. E. Daly and others.

Nashville — Phosphate Company. — Robin Jones, W. G. Sadler, William Rich, J. C. Bradford and J. H. McPhail have incorporated Union Phosphate & Railroad Co., with capital stock of $60,000. Plant has been completed. Address Robin Jones.

Springfield—Oil Wells.—F. J. Cunningham of New York and J. W. Demunbreun and S. S. Gorby of Horse Cave, Ky., have leased 1000 acres of oil lands in Robertson county, and will drill for oil.

Sweetwater—Knitting Mill.—Mascot Knitting Mills, reported last week, will double its present plant (sixty-four machines) when it removes to the new building; company will probably be interested in yarn mill proposed for erection next year.

Tullahoma—Coal and Timber Lands, Saw-mill, etc.—Tennessee Land, Lumber & Mining Co., Milton Earle, vice-president, and E. M. Barnes, manager, is securing leases on coal and timber lands in Warren and White counties for development; large saw-mills will be erected, and later on a manufacturing plant.

Vernon—Oil Wells.—Northern Mining Co. of Toledo, Ohio, Mr. Groesbeck, superintendent, has leased properties near Vernon and Nunnelly Station with a view to drilling oil wells.

Wartrace—Oil Wells.—Bedford County Oil & Mining Co., reported recently, with capital of $3000, to bore for oil, has completed its organization, electing Otto Best, president; R. M. Cleveland, vice-president; John W. Holt, secretary, and A. M. Young, treasurer.

TEXAS.

Beaumont—Oil-pipe Line.—It is said that the International Oil Co., of which Chas. J. Bell is president, is investigating with a view to constructing an oil-pipe line from Beaumont to Port Arthur.

Belton—Compress.—Central Texas Compress Co. has been incorporated, with capital stock of $160,000, by Geo. McFadden of Philadelphia, Pa.; Wm. J. Neale of Waco, Texas; James G. Timmons of Houston, and J. Z. Miller of Belton.

Bonham—Mercantile.— Chartered: Smith-Moore-Williams Company, with capital stock of $50,000, by T. B. Williams and others.

Canadian—Mercantile.—Chartered: Stockmen's Mercantile Co., with capital stock of $10,000, by C. H. Shaller and others.

Dallas—Publishing.—A. H. Major Publishing Co., with capital stock of $25,000, has been chartered by A. H. Major and others.

El Paso—Oil Wells.—Pat Durack Oil Co. has been incorporated, with capital stock of $500,000, by S. Charles Pratt, L. H. Davis and C. W. Fossett.

Galveston — Railroad Bulkhead.—Southern Pacific Railway will extend its bulkhead by 1000 feet. G. W. Boschke, engineer, has been instructed to prepare plans for the work.

Gonzales—Bridges.—Bonds have been voted for the construction of bridges. Address "The Mayor."

Houston — Carriage Repository. — W. O. Brown of Waco will establish a carriage repository at Houston, operating as the Perry Carriage Co., with W. C. Perry as president.

Houston — Stationery Plant. — Edmund Bourke, manufacturing stationer, has, with others, incorporated the Bourke-Cargill Company, with capital stock of $30,000, for the purpose of enlarging plant by installation of additional and improved machinery. Eanis Cargill will be president and treasurer, and Edmund Bourke, vice-president and general manager. Address 208-214 Fannin street.

Houston—Publishing.—Houston Chronicle Publishing Co. has been incorporated, with capital stock of $50,000, to publish an evening newspaper, with M. E. Foster, president, and G. Herbert Brown, secretary-treasurer.

Isaca — Mercantile.—Chartered: Douglass Mercantile Co., with capital stock of $10,000, by W. A. Graham and others.

Llano—Gold Mines.—Llano Mining, Milling & Smelting Co. has been incorporated, with capital stock of $1,000,000, by C. C. Wilson of Fort Worth, W. T. League, W. A. Hanger, W. A. Diboll, A. L. Coppage and others, for mining gold, smelting ores, etc. Mr. Wilson was reported lately as having bought and to develop mining property near Llano and to erect a 100-ton smelter.

Mineral Wells—Water-works.—C. E. Turner and D. M. Howard of Mineral Wells and Mr. Worsham of Fort Worth have purchased the city water-works at Mineral Wells.

Mineral Wells—Flour Mill and Elevator.—Cicero Smith will erect flour mill, of stone, with capacity of 200 barrels per day; also a steel elevator for handling wheat and other grain.

Mineral Wells—Sewerage, Street Improvements and Bridges.—City will vote October 15 on the issuance of $9000 for sewerage, streets and bridges. Address "The Mayor."

Nacogdoches—Box Factory.—Frank Bridwell will build a box and crate factory. Machinery all purchased.

Palestine—Pipe Line.—Palestine Electric Light Co. will construct pipe line and use oil instead of coal as fuel for operating its plant.

Refugio—Bridge.—Bonds to amount of $5000 will be issued for constructing bridge over the Blanco river. Address "County Clerk."

Rockdale—Gas and Oil Wells.—Incorporated: Sandy Fork Oil & Gas Co., for developing for natural gas and oil, capital stock being $100,000. C. H. Coffield, M. H. Hicks, Leonard Isaacs and others are incorporators.

San Saba—Bridges.—San Saba county has voted issuance of $16,000 of bonds for construction of three bridges across Colorado river, mentioned recently; bids for construction will probably be asked for at November term of court; L. W. Rector, county clerk.

San Saba—Water-works.—N. T. Richmond of St. Louis, Mo., has bought the water-works system at San Saba, and is laying about three miles of four-inch and six-inch mains.

Weatherford—Ice Plant.—It has been definitely decided to build the ice plant reported last week. A stock company will be formed. John H. Prince can give information.

Wooster—Oil Wells.—Wooster & Cedar Bayou Oil Co., chartered recently, has organized with Alfred Q. Wooster, president; Willard Carver, vice-president, and Geo. C. Wooster, secretary; capital stock is $90,000. Company owns small tracts of land in a territory of about seventy-five miles, and will develop for oil.

VIRGINIA.

Alexandria — Drug Company. — Bellhaven Drug Co. has been incorporated, with capital stock of $5000, and F. E. Anderson, president; Ida German, vice-president, and J. T. Ballenger, secretary.

Danville—Pants Factory.—Morotock Pants Manufacturing Co. has purchased building and will enlarge and repair preparatory to increasing capacity.

Farmville—Knitting Mill.—Jos. G. Burton of Lynchburg, Va., has leased the Farmville Knitting Mills Co.'s plant, will install twenty additional machines and continue its operation.

Farmville—Gold Mines.—Chas. A. Moore is interested in the development of gold mines in Buckingham county.

Fredericksburg—Packing-house.— Clarkson, Garrett & Hunt are building oyster packing-house.

Iron Gate—Rolling Mill.—Hyde Bros. of Pittsburg, Pa., have purchased from Poulterer & Co. of Philadelphia, Pa., their rolling-mill plant, and contemplate putting it in operation.

Norfolk — Shipbuilding Plant. — Fred O. Smith and George W. McCoy, operating as the Southern Iron Works in Berkeley, Va., have purchased land, riparian rights, 210x633 feet in dimension, and will erect a large ship-building plant, which will be equipped with marine railway, machine and boiler-making shop, saw-mill and woodworking department. Plant will be equipped with latest machinery, and compressed air will be used.

Penn-Laird—Flour Mill.—Penn-Laird Milling Co. contemplates installing additional machinery and enlarging its mill, as reported recently.

Richmond — Mineral-land Development. — Stone Development Co. has been incorporated, with capital stock of $50,000, for developing mineral properties. George L. Stone is president, and J. B. Montgomery, secretary and treasurer.

Richmond—Oil Wells.—Tye Bend Oil Co., with capital stock of not less than $50,000 nor more than $100,000, and the Stinking Creek Oil Co., with same capital, have been incorporated, with George L. Stone, president, and J. B. Montgomery, secretary and treasurer, for developing oil properties, etc.

Urbanna — Ice Company. — Rappahannock Ice Co. has completed its organization with J. W. Hurley, president; A. E. Tull, vice-president, and W. Key Howard, general manager; work on plant will be commenced at once.

WEST VIRGINIA.

Clarksburg—Coal Mines.—Clarksburg Fuel Co. will be organized for developing about 12,000 acres of coal lands in Harrison county. T. Moore Jackson, Edward Miller and A. N. Taylor of Clarksburg and W. B. Mattison of New York are interested.

Clarksburg—Oil Wells.—A company has been organized, with capital stock of $500,000, for development of coal and oil lands comprising 3347 acres. T. B. Kenting of Washington, D. C., is president; Sam. O'Neill of Clarksburg, vice-president; Isaac M. Kelly of Clarksburg, secretary and treasurer, and J. P. Moore of Sand Fork, W. Va., general manager.

Fairmont—Coal Mines.—O. P. McKinney, E. F. Hartley, C. E. Conway and C. E. Hawker propose organizing a $500,000 stock company to develop coal mines; $200,000 has been subscribed.

Parkersburg — Steel Plant.— Parkersburg Steel Co. has completed building intended to be equipped as a bar mill, but structure will be otherwise used, and a new building for bar mill will be built.

Wheeling—Ice Factory.—N. A. Hauering, A. J. Frick, J. C. McKinley and others have incorporated the Crystal Ice Manufacturing Co., with capital stock of $25,000, to manufacture ice.

Wheeling — Machine-tool Works. — C. H. Conradson of Madison, Wis., is in conference with the Board of Trade relative to establishing a $250,000 plant for the manufacture of turret lathes.

INDIAN TERRITORY.

Davis—Cotton Mill, etc.—Chicago parties are planning the development of the power of the Washita river and the erection of a cotton mill to utilize said power. Reports state that they will organize a $1,000,000 company, and that the mill will cost $300,000. J. H. Christian, manager of Crosley Manufacturing Co. at 119 La Salle street, Chicago, Ill., is interested.

Ravia—Asphalt Beds.—It is reported that J. J. Chapman has organized company to develop asphalt beds.

OKLAHOMA TERRITORY.

Lawton—Asphalt and Oil Company.—M. I. Raison, M. S. Simpson and Pauline Simpson have incorporated Virginia Oil & Asphalt Co., with capital stock of $500,000.

Oklahoma City — Cigar Factory. — Chartered: Small-Price-Bunker Cigar Co., with capital of $1500, by W. E. Small, S. F. Price and others.

Samsville—Flour Mill.—Albert L. Johnson contemplates building flour mill.

Shawnee — Electric-light Plant.—Shawnee Electric Light Co. will install additional machinery to double its capacity.

BURNED.

Alma, Texas.—Benj. Whitfill's gin; loss $10,000.

Arlington, Tenn.—V. R. Harris' heading and stave mill; loss $3000.

Bickley, Ga.—W. M. Demton's saw-mill; loss $1500.

Centerville, Ala.—Saw-mill of Cruise & Splawn damaged $700.

Coaldale, Ala.—Coaldale Paving Brick Co.'s plant; loss $15,000.

Fredericksburg, Va. — City electric-light plant damaged by flood; loss $2000.

Gainesville, Texas.—Wm. Davis' blacksmith shop.

Honey Grove, Texas. Galbraith Cotton Gin damaged.

Jacobia, Texas.—C. Dodson's cotton gin; loss $5000.

Mineral Wells, Texas.—C. M. Rogers' hotel; loss $1000.

Menardville Texas.—D. G. Benchoff's cotton gin; loss $2000.

Paris, Texas.—C. T. Ford's mattress factory; loss $4000.

Rolyat, Texas.—A. L. Black's cotton gin.

Pulaski, Tenn.—Ragsdale & Crockett's tobacco factory.

Winchester, Va.—John Thwaite's barrel factory; loss $1200.

BUILDING NOTES

Anderson, S. C.—Depot.—E. Beattie, receiver of Blue Ridge Railroad, has submitted to bidders plans for proposed $10,000 depot; structure will be 31x108 feet.

Atlanta, Ga. — Building. — Southern Bell Telephone & Telegraph Co. will erect $30,000 addition to its building.

Augusta, Ga.—Bank Building.—Planters' Loan and Savings Bank will erect new building; Lynwood C. Hayne, president.

Baltimore, Md.—Bank Building.—J. J. Walsh & Son have contract at about $85,000 to erect National Bank of Commerce's proposed building.

Baltimore, Md.—Dwellings.—John L. Muller has plans to erect ten two-story dwellings to cost $5000 each.

Baltimore, Md. — Telephone Exchange.—Chesapeake & Potomac Telephone Co. has awarded contract to John Hiltz & Son for erection of telephone exchange to cost $6000, after plans by Henry Brauns.

Berkley, Va.—Schools.—J. W. Jones has contract for erection of two schools costing $30,000; size of each is 65x80 feet, three stories.

Camden, S. C.—Store Building.—D. E. Hinsen will erect store building.

Cartersville, Ga.—Courthouse.—Fred Wagner of Atlanta, Ga., has received contract at $43,475 for the foundations of proposed courthouse at Cartersville. Contract for main building will not be awarded until after January 1.

Charlotte, N. C.—Residence.—C. Furber Jones will erect residence after plans by Frank P. Milburn of Columbia, S. C.

Charlotte, N. C.—Office Building.—D. A. Tompkins Company's new building, reported last week (under industrial heading), is to be used for office and exhibition of machinery handled.

Chattanooga, Tenn.—Block Company.—John Thompson, S. B. Wright, G. D. Lancaster and others have incorporated McConnell Block Co., with capital stock of $20,000.

Chickasha, I. T.—Residence.—E. E. White will build residence.

Chickasha, I. T. — Building. — Hayworth Bros. have let contract for erection of two-story brick building.

Clayton, N. C.—School.—Company has been organized, with W. A. Baines, secretary, for erection of school building.

Crawfordsville, Ga.—Courthouse.—County has voted an issuance of $22,500 in bonds to build a courthouse. Address "County Clerk."

Crowley, La. — Courthouse. — G. Howard Brooks, secretary police jury, will open bids November 11 for erection of courthouse to cost $75,000. Usual rights reserved.

Cumberland, Md.—Dwellings.—Dr. Wm. F. Trigg will erect $4500 brick dwelling. Mrs. Jane Roberts will erect $10,000 dwelling.

Galveston, Texas—Quarantine Residence.—State legislature has appropriated $15,000 for the construction of a quarantine residence.

Henderson, N. C. — Warehouse. — Harris Warehouse Co. has been incorporated, with capital stock of $10,000, by Geo. B. Harris, S. R. Harris and others.

High Point, N. C.—Church.—Second M. E. Church, South, will erect church, as recently reported. Address J. E. Gay.

Hot Springs, N. C.—Hotel.—Mountain Park Hotel Co. has been incorporated, with capital stock of $125,000, for conducting a hotel, by Howell, Arthur and Marion Cobb.

Huntington, W. Va.—Buildings.—Directors of West Virginia Asylum for Incurables, C. E. Rudesill, president, will open proposals October 2 for erection of building, in accordance with drawing and specifications prepared by Harrison Albright of Charleston, W. Va., who may be addressed regarding same. Proposals must be accompanied by certified check for 2 per cent. of amount of bid. Usual rights reserved.

Jacksonville, Fla. — Church. — Christian Black & Son of Camden, S. C., have been awarded contract for erection of $28,000 Episcopal church building at Jacksonville.

Jacksonville, Fla.—Statehouse.—Plans of Frank P. Milburn of Columbia, S. C., have been selected for remodeling Statehouse at a cost of $175,000; plans proposed will add two wings, three stories, 50x70 feet, new slate roof, cornice and dome, new heating apparatus and other improvements.

Kensington, Md.—School.—Four-room brick school building will be erected, as recently reported. Plans and specifications are in hands of trustees. Address John T. Freeman.

Little Rock, Ark.—Institute.—E. Casey has contract to build deaf-mute institute buildings at $64,990.

Lynchburg, Va. — Church. — Contract has been let for erection of new $12,600 edifice for Grace Memorial Church; Dr. John L. Lloyd, rector.

Macon, Ga.—Dwellings.—E. J. Willingham has let contract to R. C. Wilder's Son for erection of $7500 residence, and Hendrix & Paullius have received contract for erection of two dwellings for J. C. Curd to cost $7000.

Macon, Ga.—Engine-house.—P. W. Jones & Son have contract at $4500 for erection of city's proposed engine-house.

Messina, Fla.—School.—Board of education contemplates erecting a school building. Bids will be received until October 31. Address W. J. Merrill.

Miami, Fla.—Hotel.—S. Graham, proprietor of Hotel Biscayne, will erect five-story stone hotel to cost $50,000.

Muskogee, Ind. Ter.—Warehouse, etc.—Architect McKibban is preparing plans for erection of two-story brick mercantile building and two-story brick warehouse for H. B. Spaulding.

New Iberia, La.—Jail.—L. T. Noyes, Houston, Texas, will open bids October 1 for erection of two-story brick jail building at New Iberia, except iron and steel work, heating, plumbing and painting. Copies of plans and specifications can be seen at office of clerk of the police jury, New Iberia; of W. T. Coats, New Orleans, and of L. T. Noyes. Bond required and usual rights reserved.

Newport News, Va.—Hospital.—Newport News General Hospital Association will open bids September 28 for erection of building to cost from $12,000 to $15,000; plans now with P. T. Marye, in whose office bids will be opened.

Oklahoma City, Okla.—M. F. Lyons is preparing plans and specifications for new brick building for B. P. Smith and J. H. Tuttle, to be two stories, 75x100 feet

Ozark, Ala.—Courthouse.—F. M. Dobson of Jasper has contract at $21,440 for construction of courthouse.

Poplar Bluff, Mo.—City Hall and Jail.—L. B. Walker & Co. has contract at about $11,000 for erection of proposed city hall and jail.

Raleigh, N. C.—Residence.—J. W. Brown has awarded contract to W. B. Barrow for erection of a two-story residence.

Richmond, Va.—Factory Building.—J. T. Wilson has contract at $28,000 for erecting factory building for Richmond Industrial & Manufacturing Co., recently reported; to be four stories, 50x150 feet.

Rocky Mount, N. C.—Buildings.—The A. T. C. Company is erecting an addition 75x140 feet to its warehouse and the Rocky Mount Storage Co. an addition 99x99 feet to its warehouse.

Statesville, N. C.—Warehouse.—D. A. Miller will erect warehouse 30x75 feet, of wood, covered with sheet iron.

Staunton, Va.—Church.—Second Presbyterian congregation has let contract to G. W. Fretwell for erection of an $8000 edifice.

St. Louis, Mo.—Warehouse.—Hadley-Dean Glass Co. will build warehouse and office building after plans by Isaac S. Taylor.

St. Louis, Mo.—Exposition Buildings.—The Louisiana Purchase Exposition Co. will begin about December 1 letting contracts for the construction of its exposition recently mentioned. These contracts will aggregate about $7,000,000 for buildings and $4,000,000 on the grounds. The first contracts will be for four buildings to cost $4,000,000. Isaac S. Taylor, 111 Fifth avenue, is director of construction and maintenance.

St. Louis, Mo.—Mercantile Building.—Julius Lesser and J. D. Goldman are having plans made by Eames & Young for erection of an eight-story commercial building, to be fireproof and contain electric plant, freight and passenger elevators, pneumatic-tube system and all modern conveniences; cost $500,000.

Tallahassee, Fla.—Business Building.—Julius Hirschberg has awarded contract to Gilmore & Davis for erection of two-story brick business house.

Wilmington, N. C.—Store and Office Building.—Atlantic Coast Line will erect two-story brick store and office building.

Xenia, Ohio—School.—Bids will be opened October 10 for erection of school building after plans and specifications on file with W. Chamberlin & Co. of Birmingham, Ala., the architects, and with Xenia school board.

RAILROAD CONSTRUCTION.

Railways.

Alexandria, Tenn.—A proposition has been made to the business men of Alexandria to assist in constructing a branch railroad, which will connect the town with the Nashville & Knoxville road.

Ashland, Ga.—It is reported that surveys recently made for a railroad in Tallapoosa county were in the interest of the Central of Georgia Railroad Co., and that the road will terminate at Ashland. John M. Egan at Savannah is president of the company.

Athens, Texas.—About 150 miles of what is known as the Athens branch of the Southern Pacific system in Texas has been completed. It is to be extended from Dallas to Beaumont, and work is in progress. G. W. Boschke of Galveston is engineer of the company.

Bastrop, La.—The New Orleans & Northeastern Railroad Co. has let a contract to build an extension from Bastrop to El Dorado, Ark. T. M. Dodson & Son of Jonesboro, Ark., are the contractors.

Beaumont, Texas.—It is reported that a decision has been reached relative to the extension of the International & Great Northern Railroad between Spring and Beaumont, and that work is to begin in the near future. The estimated length of the line is eighty miles. Leroy Trice at Palestine, Texas, is general manager.

Blue Spring, Ala.—The business men of Blue Spring and vicinity are agitating the question of building a railroad from Louisville to Blue Spring, an estimated distance of ten miles.

Brunswick, Ga.—The latest report relative to the Brunswick & Birmingham road is to the effect that it has been graded about forty miles. As has already been stated in the Manufacturers' Record, train service has been established between Brunswick and a point on the Seaboard Air Line, a distance of twenty miles. E. C. Machen of 120 Broadway, New York, is president of the company.

Butler, Tenn.—The final surveys, it is announced, have been completed for what is known as the Trans-Appalachian Railroad between Butler and Watauga, Tenn. The road is eventually to be built from Butler to Morganton, N. C. W. E. Walton is engineer.

Chatham, N. C.—It is reported that the extension of the Raleigh & Western Railroad, under construction, will be completed in the near future. About fifteen miles have been graded. Samuel A. Henszey, president of the company, may be addressed at 903 Exchange court, New York. The road is now in operation between Colon and Millane, a distance of twenty-nine miles. The extension will terminate at Asheboro, and will be twenty miles in length.

Cumberland, Md.—The company promoting the electric railroad between Cumberland and Frostburg is understood to be considering the use of motors operated by storage batteries. The section between Cumberland and Frostburg will be completed about December 1. J. W. Burchinal at Moundsville, W. Va., is one of the directors.

Gulfport, Miss.—It is stated that an extra track may be built in connection with the Gulf & Ship Island Railroad its entire length between Jackson and Gulfport, a distance of 160 miles. J. T. Jones of Buffalo, N. Y., is president, and Thomas G. Hale of Gulfport, vice-president.

Hamburg, S. C.—It is stated that the Palmetto Lumber Co. is considering an extension of the railroad it operates between Hamburg and McRee to Monroe, N. C.

Hornersville, Mo.—The Paragould Southeastern Railway is being extended from Hornersville to Chicasaba, Mo., a distance of fourteen miles. The line is now a portion of the St. Louis Southwestern system, of which F. H. Britton of St. Louis is vice-president.

Little Rock, Ark.—Progress upon the extensions of the Choctaw, Oklahoma & Gulf system has been made as follows: The Choctaw & Northern Railroad is being completed from Geary, Okla., to Alva, a distance of 104 miles; the extension from Weatherford, Okla., to Sayre, I. T., has been completed; it is sixty-five miles in length. This line is to be completed to Amarillo, Texas, a total distance of 117 miles. F. A. Molitor of Little Rock is chief engineer.

Owingsville, Ky.—P. Armitage, engineer of the proposed railroad between Owingsville and Preston, informs the Manufacturers' Record that preliminary surveys are being made, and that it is expected to reach a decision about the construction in a few days.

Plant City, Fla.—It is reported that the Seaboard Air Line has become interested in the railroad under construction between Plant City and Palmetto. The estimated length of the railroad is forty miles. J. M. Ennis of Braidentown has secured a contract for constructing five miles.

Port Royal, S. C.—It is reported that the scheme to build the Black Diamond Railroad system, first promoted by Albert E. Boone of Zanesville, Ohio, has been revived, and that William Kirkby of Toledo, Ohio, has succeeded in interesting foreign capitalists in the enterprise.

Portsmouth, Va.—The Seaboard Air Line has given a contract to the Stewart Contracting Co. of Columbia, S. C., to ballast the system between Richmond, Atlanta and Tampa, Fla., with rock. A stone-crushing plant has been erected near Henderson, N. C., which it is expected will turn out 1000 tons daily. The work is to begin on the line between Henderson and Columbia.

Sparrow's Point, Md.—It is announced that contracts will probably be let immediately for the electric railroad between Dundalk, Sparrow's Point and North Point, in Baltimore county. It will be a branch of the United Railways & Electric Co. of Baltimore. William A. House at Baltimore is vice-president and general manager.

Sylva, N. C.—It is reported that the Willetts Lumber Co. is interested in a plan to build a railroad from Sylva to East La Porte.

Union Springs, Ala.—The Union Springs & Northern Railroad, under construction between Union Springs and Fort Davis, is nearly completed, and it is reported that trains will be in operation over this portion of the line, which is thirty miles in length, within the next month. The railroad will probably be extended to Tuskegee, Ala., making its total length forty-four miles. B. H. Hardaway, temporarily located at Union Springs, is the contractor.

Villa Rica, Ga.—The Villa Rica Branch Railroad Co. has been organized to build about three miles of line to mines located in Carroll county. The road will be a feeder of the Southern system when constructed. J. S. B. Thompson and Albert Howell, Jr., are among those interested.

Wilmington, N. C.—Surveys are to be made immediately upon the electric railroad to be built between Wilmington and Wrightsville, which will take the place of the present steam road. It is expected to begin construction as soon as the necessary data has been secured. Hugh MacRae at Wilmington is one of the principal promoters.

Yadkinville, N. C.—Surveys are now in progress, it is reported, for a branch of the Southern Railway system which will terminate at the water-power on the Yadkin river. W. H. Wells at Washington is engineer.

Street Railways.

Baltimore, Md.—It is announced that the United Railways & Electric Co. will probably construct a trolley line in the northeastern section of the city upon several streets. George R. Webb is president of the company.

Machinery, Proposals and Supplies Wanted.

Manufacturers and others in need of machinery of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery needed we will make their wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. The MANUFACTURERS' RECORD has received during the week the following particulars as to machinery that is wanted.

Agricultural Implements. — Donohoo & Ware Hardware Co., Canyon City, Texas, will be in the market for a two-row cultivator.

Bobbin Machinery.—J. Lundie Sloss, 411 Chalifoux Building, Birmingham, Ala., wants names of manufacturers of bobbins for cotton mills, also manufacturers of bobbin machinery.

Boiler and Engine.—J. F. Shearwood, Merrill, Miss., is in market for 40-horse-power boiler and engine, with gang edger.

Boilers, etc.—A. S. Kenny, paymaster-general, Navy Department, Washington, D. C., will open bids October 1 for furnishing at Norfolk (Va.) navy-yard one battery of boilers and a quantity of structural iron work. Blank proposals furnished on application.

Boilers, etc.—Proposals will be received until October 1 at bureau of supplies and accounts, Navy Department, Washington, D. C., for furnishing at navy-yard, Norfolk, Va., one battery of boilers and a quantity of structural steel work. Blank proposals will be furnished on application to pay navy office, Norfolk; A. S. Kenny, paymaster-general, United States Navy.

Brick Machinery.—Orange Brick Co., Orange, Texas, wants to correspond with manufacturers of brick machinery.

Bridge.—Bids will be open October 10 for construction of iron or covered wood bridge across river about fifty yards wide, including trestle approach of thirty or forty yards. Usual bonds required from successful bidder. For further information address Geo. T. Rison, Chatham, Va.

Bridges.—San Saba county will receive bids until October 3 for construction of two bridges across Richland creek, one 80-foot span and one 60-foot span; L. W. Rector, county clerk, San Saba, Texas.

Can Manufacturers.—S. H. Collins, Milton, Fla., wants addresses of tin-can manufacturers.

Canning Machinery.—John K. Hogan, Ennis, Texas, wants catalogues of canning machinery.

Church Furniture.—Rufus C. Jackson, treasurer Presbyterian church, Mt. Pleasant, Tenn., wants to correspond relative to buying church pews.

Coaling Plant.—M. T. Endicott, chief of yards and docks bureau, Washington, D. C., will open proposals October 26 for constructing plant for receiving, storing and delivering coal at navy-yards. Send for plans, blank forms, etc.

Coffin Factory.—See "Woodworking Machinery."

Cotton Machinery.—Scotland Cotton Mill, Laurinburg, N. C., wants bids on five 40-inch revolving flat cards.

Drugs, etc.—The New Drug Store, D. A. Davis, manager, Waxhaw, N. C., will buy stock of drugs and fixtures.

Electric-light Plant.—Gate City Furniture Manufacturing Co., Greensboro, N. C., wants 100 lights of twenty-five candle-power each and dynamo to operate 150 lights of same candle-power; quote prices new and second-hand.

Electric-light Plant.—The call for bids on construction of water-works and electric-light plant at Tullahoma, Tenn. (published September 12), erred, in that date of opening proposals is September 24, and not 18, as was stated, and the engineer for the work is Granbery Jackson (not Hicks, as was printed) of Nashville, Tenn. Amount available for this contract is $35,000.

Elevators.—J. S. Powell, captain United States engineers, 735 North Capitol street, Washington, D. C., will open bids October 16 for furnishing and installing electric elevators in new printing-office building. Information on application.

Engine.—See "Pumping Plant."

Engine.—E. Cagle Manufacturing Co., Rock Hill, S. C., wants 8 or 10-horse-power gasoline engine, new or second-hand.

Engines.—See "Lumber Plant."

Excelsior Machinery.—W. F. Deal, Emporia, Va., wants information regarding machinery for making excelsior.

Flywheel.—Voorhees Rubber Manufacturing Co., 18-28 Bostwick avenue, Jersey City, N. J., is in the market for 16-foot flywheel, 10-inch shaft and to weigh about 25,000 pounds.

Foundries.—Crescent Bed Co., Ltd., New Orleans, La., wants addresses of foundries making a specialty of small bench work, that is, small castings that range from one-half pound to fifteen pounds each.

Heating and Models.—A. S. Kenny, paymaster-general, Navy Department, Washington, D. C., will open bids October 1 to furnish at Annapolis (Md.) Naval Academy labor and material for furnishing and erecting heating apparatus and castings for ornamental plaster work. Blank proposals now ready.

Ice Plant.—Radford Ice Co., Radford, Va., wants to buy second-hand 10-ton ice plant, minus boiler and engine.

Laundry Machinery.—M. W. Satterfield, Roxboro, N. C., is in market for machinery for steam laundry.

Lumber Plant.—Geo. T. Houston & Co., Twenty-second street and Second avenue, Chicago, Ill., will soon be prepared to receive bids on machinery for large lumber plant, veneer mill, two 1000-horse-power engines, etc.

Mining Equipment.—Chatham Coal & Iron Co., Cumnock, N. C., will be in the market for air compressors, hoisting engines, pumps, etc.

Oil-mill Machinery.—J. C. Hartselle & Son, Hartselle, Ala., may want cottonseed huller.

Oil-well Supplies, etc.—Merchants & Mechanics' Oil Co., Taylor, Texas, will be in market for about five miles of six-inch pipe, two or three 50,000-barrel oil tanks, two 1200-barrel settling tanks, boiler and pumps, etc.

Paper Cutter.—C. T. Watt & Co., Montgomery, Ala., want to purchase a small machine for making confetti, new or second-hand.

Pipe Fittings, etc.—E. A. Hitchcock, Secretary Department Interior, Washington, D. C., will open bids September 23 for valves, fittings, pipe, etc., in accordance with specifications obtainable on application.

Piping.—See "Oil-well Supplies, etc."

Plaster Models. — See "Heating and Models."

Pump.—Eufaula Brick Manufacturing Co., Dawson, Ga., is in the market for a power pump for lifting water from well four feet diameter and fifty feet deep, to supply fifteen to twenty gallons per minute.

Pumping Engine.—See "Oil-well Supplies, etc."

Pumping Plant.—J. P. Winston, Louisburg, N. C., wants two or three-horse-power gasoline engine for filling tank ninety-five feet high.

Roofing.—Lacy Manufacturing Co., Fayetteville, N. C., is in market for 150 squares of roofing; wants prices delivered.

Rope.—See "Wire Rope."

Stereoscopes.—C. B. Preacher, Brunson, S. C., wants to buy stereoscopes and views.

Store Fixtures.—See "Drugs, etc."

Tanks.—See "Oil-well Supplies, etc."

Timber Lands.—Hughes Specialty Well Drilling Co., Charleston, S. C., wants information concerning tracts of juniper and locust timber lands in South Carolina, Georgia or Florida.

Tobacco Factory.—Southern Co-operative Foundry Co., Rome, Ga., wants to correspond with dealers in and makers of tobacco-factory equipments.

Water Supply.—See "Well-drilling."

Water-works.—See "Electric-light Plant."

Well-drilling.—Granbery Jackson, C. E., Nashville, Tenn., wants to correspond with parties prepared to drill for water supply.

Wire Rope.—John Sweet & Son, Lawton, Va., want prices on 630 feet of galvanized three-quarter-inch wire rope for ferry use.

Woodworking Machinery.—See "Boiler and Engine."

Woodworking Machinery.—D. W. Townsend, Maxton, N. C., wants prices on coffin machinery and materials.

Woodworking Machinery.—D. H. McNobb, Erwin, Tenn., wants prices on new and second-hand upright shingle machinery.

Woodworking Machinery.—E. Cagle Manufacturing Co., Rock Hill, S. C., wants turning lathe, 14-inch swing, new or second-hand.

Woodworking Machinery.—J. P. Thomson, Garland, N. C., wants to buy shingle machine to saw and dress; second-hand preferred.

Woodworking Machinery.—Hadley-Peoples Manufacturing Co., Siler City, N. C., wants to correspond with makers of machinery for making hames, singletrees and plow handles.

Woodworking Machinery. — See "Bobbin Machinery."

TRADE NOTES.

A Notable Order.—The Burt Manufacturing Co. of Akron, Ohio, has recently installed a Cross Oil Filter in the power plant of the Washington monument.

Another Large Contract.—The Peck-Hammond Co., Cincinnati, Ohio, has been awarded the contract for the mechanical heating and ventilating of the new high-school building at Union City, Tenn.

Rails for Sale.—Walter A. Zelnicker may be addressed at St. Louis, Mo., relative to ten miles of 35-pound relay steel rails, which are offered for immediate delivery. The rails will be shipped from New Orleans.

Important Contract.—The Masonic Temple at New Orleans is to be equipped with Fairbanks gas engines, dynamos, also a motor and a passenger elevator. The Fairbanks Company of New Orleans will install the apparatus, and will also arrange the electrical wirng of the building.

New Pipe-Cutting Plant.—The latest addition to the works of the Crane Company of New York is a plant for cutting, threading and flanging of pipe of all sizes, also for pipe-bending. The shop is 125x100 feet in size, and contains thirteen pipe machines, in addition to apparatus for screwing and refacing flanges. The shop is well located, and as it is directly on the East river, is accessible to lighters. It is located at 497 Cherry street.

Young and Progressive.—Energetic and progressive young men are represented by the firm of Hill & Morgan, who have opened an office at 309 South Sharp street, Baltimore, and are prepared to act as manufacturers' agents. They intend to represent reliable industrial concerns, and would be pleased to correspond with companies and firms of this class. The firm is prepared to cover a wide area of trade territory, and has the facilities for so doing.

Right Into Business.—Although the Southern office of the Sterling Blower & Pipe Co. of Hartford, Conn., has been opened but a few days, it has received orders from a large furniture company at Statesville, N. C., which desires its plant equipped with the Sterling Blower system and automatic furnace feeders for sawdust and shavings. The new office is located in Norfolk, Va., and the company is in a position to give prompt and careful attention to all inquiries.

From All Over the Country.—Recent orders received by the York Manufacturing Co. of York, Pa., for its ice-making and refrigerating machinery indicate that its trade territory extends throughout the United States. The orders include plants for Marietta, Ga.; Philadelphia, Pa.; Bristol, Tenn.; St. Louis, Mo.; Pittsburg, Pa.; Mt. Vernon, Ohio, and East St. Louis, Ill. One of its customers is the St. Louis Brewing Association, which has given a contract for a 225-ton refrigerating machine and compression side.

Measured by Miles.—The manufacturers of the "Cocheco" rawhide lace leather and the Oriole tanned lace leather point with pardonable pride to the extent of their sales. It is estimated that the material which they have made would extend a distance of over 10,000 miles if the strips of lace were laid end to end. It is hardly necessary to say that the brands referred to come from the factory of Messrs. I. B. Williams & Son of Dover, N. H. This firm is prepared to fill orders for a thousand or a million feet of the lacing with equal promptness.

Griffin Mills.—The Bradley Pulverizer Co. of Boston is scoring great successes with these mills, especially among Portland cement makers, who find that they are the most economical mills in the market. Among the many recent sales have been twenty-four Griffin Mills to the Great Northern Portland Cement Co., twenty-two Griffin Mills to the Lehigh Portland Cement Co. for its new works in Indiana, and thirty-two mills to the Indiana Portland Cement Co., with other sales about consummated. Such large orders from such large concerns prove that the Griffin Mills are well worthy of their leading position in the trade.

Used Everywhere.—This may appropriately be said of the apparatus manufactured by the B. F. Sturtevant Co. of Boston, for it is in service in every State of the Union. It has been found of much value in ventilating railroad tunnels, and what is known as the Elkhorn Tunnel, on the Norfolk & Western Railroad, has two large Sturtevant fans, which furnish an ample supply of fresh air. Traveling from West Virginia to Washington, the Agricultural College and School of Science in that State is equipped with a Sturtevant fan for producing draft for boilers representing 580 horse-power. The apparatus was installed partly for instructing the students in the advantages of this method.

TRADE LITERATURE.

Where to Get Manganese.—Anyone who will correspond with Messrs. Kendall & Flick at Washington, D. C., will have this question answered to his satisfaction, as the firm referred to produces manganese in the various commercial sizes and of the best grade. It controls a number of mines in Virginia, which are referred to in a booklet recently issued.

Vitally Important.—The subject of drinking water is of vital importance, since its purity or impurity has such an effect on the health. This fact is emphasized in a leaflet recently published by the Hygeia Filter Co. of Detroit, which treats of the Eclipse, Monarch, Climax and other filters manufactured by this company. They are made in various sizes suitable for hotel and family use. Testimonials show that they completely purify the water and deserve the popularity they have attained.

The Pulley Question.—The pulley question has been a subject of discussion for years with all users of power. New inventions are continually being placed on the market which have more or less merits. The West Virginia Pulley Co. of Clarksburg, W. Va., seems to have been unusually fortunate in its design, which has become very popular. It is termed the Wood Split Pulley, and is provided with a laminated rim. It is constructed of the best material, and has a number of important claims in its favor. A pamphlet recently issued by the company mentions the various sizes and prices.

Overhead Electrical Construction.—Electricians appreciate the meaning of this term, as it represents one of the most important phases of their work. The manner in which the wire is fastened and insulated is of vital importance. Consequently, the bulletin recently issued by the Wagner-Palmros Manufacturing Co. of Fairmont, W. Va., relative to overhead construction is of unusual interest. While it deals with mining haulage especially, the illustrations and text contain much electrical information of general value. The specialties manufactured by this company include trolley and feeder clamps, mine hangers, wire splicers and insulators.

A Practical Pumping System.—The Newman Manufacturing Co., 26 Cortlandt street, New York, describes and illustrates the continuous service foot valve and the continuous service suction screen which it has placed on the market. One of the advantages they possess is that water can be taken from streams or ponds containing sticks, leaves or other obstructions without clogging the mechanism. The portion of the pump in the water is protected by a screen, which prevents any refuse entering the suction pipe. In connection with the apparatus the continuous service foot valve is specially valuable for water contaminated with acids. The company will be pleased to furnish any additional information desired.

Improves With Age.—This is the history of Messrs. Geo. B. Carpenter & Co. of Chicago. Established in 1840—sixty years ago—this firm has steadily increased its business, and has a wide reputation for its covers. It furnishes tents for lumbermen, contractors, stables, etc. It makes a specialty of khaki tents and covers, such as are used by the United States government, and is also prepared to supply all kinds of contractors' tools, packings, cordage, wire rope, pile-drivers, etc. One specialty which has given the firm a reputation is the celebrated Old Colony transmission rope. The latest catalogue will be furnished by addressing the firm at 200-208 South Water street and enclosing five cents in postage.

Bowsher Combinations.—When the N. P. Bowsher Company puts out new apparatus, millers, farmers and other patrons of this company wonder what it will do next, for apparently it is continually improving upon its devices. It is a concern that endeavors to keep strictly up to the times, and, judging from the extent of its business, it is successful in so doing. The latest catalogues, with new covers and new half-tone cuts, illustrate and describe the Bowsher feed mills, giving an excellent idea of the advantages which they possess. Really they are indispensable in the production of ground feed, and are in use throughout the country. They are furnished with or without elevators, and in a variety of sizes. By addressing the company at South Bend, Ind., copies of the catalogues will be cheerfully furnished.

Textile Industry Directory.—The "American Textile Directory" for 1901-1902 has been issued, and is now ready for distribution. This publication is of great value to all those connected directly or indirectly with the textile industry, and to many others in different branches of business life. Its contents include complete lists and summaries of all the cotton, woolen, knit, flax, silk and other textile mills and allied factories in the United States, British Provinces, Mexico, Central and South America. The amount of useful information presented has been prepared in a handy form, so that any facts desired can be readily found through the indices. This information includes details as to railways, banks, population of mill towns, officers, capital, equipment, product, materials used and selling agents of the numerous plants. The book is published by the American Directory Co. of New York city, to which application may be made for further particulars.

THE CHESAPEAKE & OHIO RAILWAY CO.

TWENTY-THIRD ANNUAL REPORT.

Richmond, Va., September 16, 1901.

To the Stockholders:

The twenty-third Annual Report of the Board of Directors for the fiscal year ending June 30, 1901, is herewith submitted:

MILEAGE OPERATED.

	June 30, 1901.	June 30, 1900.	Inc.
Main Line—Fort Monroe to Cincinnati	664.1	664.1	....
Richmond & Alleghany Line—Fulton to Clifton Forge	231.8	231.8	....
Washington Line—Washington to Gordonsville	93.5	93.5	....
Louisville Line—Ashland to Louisville	208.4	208.4	....
Greenbrier Line—Whitcomb to Cass	80.8	.....	80.8
Branches	283.0	278.4	4.6
First track	1,561.6	1,476.2	85.4
Second track	129.2	128.6	.6
Sidings	551.3	533.5	17.8
Total all tracks	2,242.1	2,138.3	103.8
Average mileage operated	1,506.6	1,476.2	30.4

ROAD OWNED.

	1901, miles.		Inc.
Main Line—Fort Monroe, Va., to Big Sandy River, Ky	512.0		
Richmond & Alleghany—Fulton, Va., (Richmond) to Clifton Forge, Va	231.4		
Branches in Virginia and West Virginia	134.1		
		877.5	
LEASED.			
Orange Branch, Southern Railway—Gordonsville, Va., to Orange, Va	9.0		
Passenger & Belt Railway—Lexington, Ky	4.2		
		13.2	
OPERATED THROUGH STOCK OWNERSHIP.			
Maysville & Big Sandy Railroad—Ashland Junc., Ky., to Licking River, Ky.	142.7		
Covington Short Route Transfer Railway—Licking River, Ky., to K. C. Junction, Ky	0.8		
Cov. & Cin. Elev. R. R. and Transfer & Bridge Co.—K. C. Junction, Ky., to Cincinnati, O	2.1		
Kinniconnick & Freestone Railroad—Garrison, Ky., to Carter, Ky	19.8		
		165.4	
Elizabethtown, Lexington & Big Sandy Railroad—Big Sandy River, Ky., to Ashland Junction, Ky., and Strait Creek, Ky., to Lexington, Ky	109.2		
Ohio & Big Sandy Railroad—Hampton, Ky., to Peach Orchard, Ky	48.2		
Ohio River & Charleston Railway of Kentucky—Richardson, Ky., to White House, Ky	8.1		
Kentucky & South Atlantic Railroad—Mt. Sterling, Ky., to Rothwell, Ky	19.5		
		185.0	
Greenbrier Railway—Whitcomb, W. Va., to Cass, W. Va	80.8		80.8
Greenbrier & New River R. R.—Thurmond, W. Va., to Kaymoor, W. Va	12.6		
Glen Jean, Lower Loup & Deep Water Railroad—Glen Jean, W. Va., to Carlisle, W. Va	3.6		3.6
Alberene Railroad—Warren, Va., to Alberene, Va	11.1		
		108.1	
OPERATED UNDER CONTRACT.			
Sulphur Mines Railroad—Mineral, Va., to Sulphur Mines, Va	4.0		
Quinnimont Short Line Railroad—Quinnimont, W. Va., to Greenwood, W. Va	5.2		1.0
Keeney's Creek Railroad—Nuttall, W. Va., to Lookout, W. Va	7.8		
Deep Water Railroad—Deep Water, W. Va., to Robson, W. Va	3.8		
		20.8	
TRACKS OF OTHER COMPANIES USED UNDER AGREEMENTS.			
Baltimore & Potomac and Washington Southern, Washington, D. C., to Alexandria, Va	6.7		
Southern Railway—Alexandria, Va., to Orange, Va	77.8		
Ashland Coal & Iron Railway—Ashland Junction, Ky., to Strait Creek, Ky.	21.3		
Louisville & Nashville Railroad—Lexington, Ky., to Louisville, Ky	84.4		
Southern Railway, at Richmond, Va	0.4		
Baltimore & Ohio Railroad, at Lexington, Va	1.0		
		191.6	
Total		1,561.6	85.4

GENERAL INCOME ACCOUNT

For the Year Ending June 30, 1901, and Comparison with 1900.

	1901.	1900.	Inc. or dec.
Earnings:			
From Freight Traffic	$11,842,213 04	$10,095,144 20	Inc. $1,747,068 84
From Passenger Traffic	2,826,813 39	2,681,076 37	Inc. 145,737 02
From Express Traffic	189,426 44	171,907 90	Inc. 17,518 54
From Transportation of Mails	349,884 45	324,678 22	Inc. 25,205 23
From Miscellaneous Sources	163,204 49	129,263 58	Inc. 33,940 91
Gross Earnings	$15,371,541 81	$13,402,070 27	Inc. $1,969,471 54
Expenses:			
For Maintenance of Way and Structures	$2,217,760 52	$1,865,413 75	Inc. $352,346 77
For Maintenance of Equipment	2,253,307 18	1,909,241 46	Inc. 344,065 72
For Conducting Transportation	4,844,375 22	4,686,309 74	Inc. 158,065 48
For General Expenses	250,437 43	245,820 42	Inc. 4,617 01
Operating Expenses	$9,565,880 35	$8,706,785 37	Inc. $859,094 98
	62.2%	64.9%	
Net Earnings	$5,805,661 46	$4,695,284 90	Inc. $1,110,376 56
To which add:			
Income from other sources	149,925 27	148,371 28	Inc. 1,553 99
Gross Income	$5,955,586 73	$4,843,656 18	Inc. $1,111,930 55
From which deduct:			
Interest on Funded Debt	$3,160,093 74	$3,061,293 51	Inc. $ 98,800 23
Interest on bonds of controlled roads	182,345 82	168,850 00	Inc. 13,495 82
Interest, Discount and Exchange	65,411 98	60,081 41	Inc. 5,330 57
Taxes	401,299 31	380,853 31	Inc. 20,446 00
Loss on C. & O. Grain Elevator and Cin. Coal Terminals	60,992 48	14,739 66	Inc. 46,252 82
Loss on C. & O. Steamship Line	34,703 02	*	Inc. 34,703 02
C. & O. S. S. Debentures purchased and cancelled	48,551 50	*	Inc. 48,551 50
Uncollectible Accounts	291 84	1,256 41	Dec. 964 57
Total Deductions	$3,953,689 69	$3,687,074 30	Inc. $266,615 39
Net Income	$2,001,897 04	$1,156,581 88	Inc. $845,315 16

From this Net Income for the year			$2,001,897 04
the following has been deducted:			
Extraordinary expenditures for new equipment and construction			1,304,171 78
Balance transferred to credit of Profit and Loss			$697,725 26
Amount to credit of Profit and Loss June 30, 1900		$1,060,341 78	
Deduct:			
Dividend No. 2, paid November 26, 1900	$605,288 00		
Discount on bonds sold	68,062 50		
Sundry old accounts written off	22,391 46		
		695,741 96	
			364,599 82
Balance to credit of Profit and Loss June 30, 1901			$1,062,325 08

*Deducted from Gross Earnings in 1900.

The decrease of $1000 in Capital Stock shown in Balance Sheet is due to the conversion of preferred stock into bonds and common stock.

The increase in Funded Debt of $1,516,000 shown by Balance Sheet is explained as follows:

Issue of 4½ per cent. bonds for construction purposes	$1,500,000 00
Issue of 4½ per cent. bonds for equal amount Manchester bonds (in Treasury)	15,000 00
Issue of 4½ per cent. bonds account exchange of preferred stock	1,000 00
	$1,516,000 00

The amount realized from the sales of 4½ per cent. bonds, the Manchester water-power, which was sold in previous year, and the Richmond Dock property, sold this year, was appropriated as follows:

For second track	$1,191,559 21	
For other improvements	3,610,891 41	
		$4,802,450 62
The amount drawn from fund to June 30, 1901, has been—		
For second track (uncompleted)	$1,079,923 03	
*For other improvements	3,610,891 41	
		4,690,814 44
Balance to credit of second track fund		$111,636 18

*In addition to this there was charged to Extraordinary Expenditures, as a deduction from Income, $352,381.19, representing the expenditure for Richmond and other improvements over and above the appropriation therefor provided by the issue of bonds.

NEW CONSTRUCTION.

	Expended during year ended June 30, 1901.	Total amount expended to June 30, 1901.	Estimated amount necessary for complet'n.
Provided for by the sale of 4½% Bonds:			
Second track (50 miles)	$365,910 06	$1,111,145 85	$150,000 00
Richmond track elevation, including real estate	1,241,431 79	*1,488,648 20	358,767 00
Richmond passenger station (one-half cost)	93,099 26	97,044 37	153,000 00
Piney Creek Branch (13.6 miles)	143,634 03	524,577 61	Completed.
Guyandot Valley Line (26.5 miles)	431,136 88	557,636 88	Completed.
Total	$2,275,212 02	$3,779,052 91	$661,767 00
Provided for by separate issue of Bonds:			
Greenbrier Railway	†$1,279,347 55	$2,050,902 04	$70,400 00
Greenbrier & New River Railroad	113,940 72	166,684 56	38,000 00
Total	$1,393,288 27	$2,217,586 60	$108,400 00
Grand Total	$3,668,500 29	$5,996,639 51	$770,167 00

*$214,147.98 expended for real estate prior to June 30, 1899.
†Includes discount on bonds and interest on loan.

EXTRAORDINARY EXPENDITURES YEAR ENDING JUNE 30, 1901, DEDUCTED FROM NET INCOME.

25 freight and 3 passenger locomotives	$438,275 92
9 passenger cars	47,291 85
302 freight cars	196,478 39
21 cabin cars	15,282 78
Partial payments on new steamer "Virginia"	56,675 00
Car float	19,304 71
50-ton steam derrick	11,382 52
Electric crane, Newport News Dock	11,555 43
Overhead bridge at Twenty-eighth street, Newport News	39,015 66
Telephone line, Hinton to Handley	6,144 70
Land damages, account double track at Catlettsburg, Ky	4,514 66
15.6 miles additional sidings, including yard tracks	105,867 97
Construction in excess of bond issue	352,381 19
Total	$1,304,171 78

The following items are included in Operating Expenses:

MAINTENANCE OF WAY AND STRUCTURES.

New buildings	$41,516 53
Permanent bridge structures and embankments	166,228 03
Ballast	78,057 74
Ties	273,519 60
Rails	235,6 0 45
Interlocking	1,293 21
Change of Line at Snowden, R. & A. Line	12,403 87
Improvements at Mann's Tunnel, near Fort Spring	17,057 05
Miscellaneous	15,552 06
Total	$841,578 54

MAINTENANCE OF EQUIPMENT.

1 locomotive	$15,837 24
1 baggage car	4,610 14
1 car barge	7,375 00
533 freight cars	230,511 99
New tools and machinery	54,056 01
Betterments to locomotive equipment	14,711 32
Total	$327,101 70
Grand Total	$1,168,680 24

New equipment as above represents replacements during the year account equipment destroyed.

In addition to 13,809 freight cars owned by the Company, there are 5400 freight cars in its possession, the ownership of which is in the building companies pending the final settlement therefor, on which monthly payments are to be made as follows:

Contract 3—1000 box cars, expiring September 15, 1901	$12,175 00
Contract 4—500 gondola cars, expiring September 20, 1903	3,333 33
Contract 5—800 gondola cars, expiring June 1, 1904	6,369 33
Contract 6—1000 box cars, expiring October 1, 1904	9,116 67
Contract 7—1500 gondola cars, expiring July 15, 1905	19,372 60
Contract 8—600 steel gondola cars, expiring December 15, 1905	8,100 00
Total monthly payments	$58,466 93
Amount paid on this equipment to June 30, 1901	$1,902,696 02
Amount charged to Operating Expenses and sundry credits, year ending June 30, 1901	$266,308 80
Previously charged	764,121 79
	1,030,430 59
Amount held in suspense to be charged to Operating Expenses in future	$872,265 43

Contract No. 1, covering 1000 box cars, and Contract No. 2, covering 500 gondola cars, having expired January 3, 1901, and June 15, 1901, respectively, and the full payments having been made thereunder, the said cars became the property of the Company on the dates named.

The 25 locomotives and 100 coke cars mentioned in the last Annual Report as having been ordered last year were received, also 4 additional locomotives, 200 flat cars, 21 cabin cars, 1 pressed-steel car, 1 steam derrick and 10 passenger cars. Of this number 1 locomotive and 1 passenger car were charged to Operating Expenses to replace equipment dismantled; the remainder were charged to Extraordinary Expenditures and deducted from Income. In addition, $230,511.99, the cost of 533 freight cars, was charged to Expenses to replace equipment destroyed.

FREIGHT TRAFFIC STATISTICS.

ALL LINES OPERATED DIRECTLY.

	1901.	Inc. or dec.
Miles	1,506.6	Inc. 30.4
Freight earnings	$11,842,213.04	Inc. $1,747,068.84
Per cent. of gross earnings	77	Inc. 1.7
Coal and coke carried, tons	5,422,332	Inc. 779,341
Other freight carried, tons	4,703,165	Dec. 400,684
Number of tons carried, total	10,125,497	Inc. 378,657
Number of tons carried one mile	3,051,175,642	Inc. 104,281,538
Average miles each ton was carried	301	Dec. 1
Number of tons carried per mile of road	6,720	Inc. 67
Number of tons carried one mile per mile of road	2,025,206	Inc. 13,812
Freight earnings per mile of road	$7,860.22	Inc. $969.81
Average earnings per ton	$1.17	Inc. $0.14
Average earnings per ton of coal per mile (mills)	2.72	Inc. .70
Average earnings per ton of freight other than coal (mills)	5.25	Inc. .69
Average earnings per ton per mile from all freight (mills)	3.88	Inc. .45
Average number of tons per loaded car	22	Inc. 1
Average revenue train load (tons)	511	Inc. 23
Average train load, including Company freight, tons	533	.....
Average number loaded cars per east-bound freight train	29.6	Dec. .4
Average number empty cars per east-bound freight train	5.3	Inc. .8
Average number loaded cars per west-bound freight train	15.9	Dec. .5
Average number empty cars per west-bound freight train	18.5	Inc. .2
Average number loaded cars in train	22.8	Dec. .5
Average number empty cars in train	11.9	Inc. .5
Total cars per freight train	34.7	.....

*Miles run by freight trains	5,969,060	Dec.	97,501
Miles run by switch and construction trains	3,343,143	Inc.	155,397
Freight car mileage	207,290,856	Dec.	2,326,122
Loaded car mileage	135,825,332	Dec.	4,772,886
Empty car mileage	71,465,524	Inc.	2,446,764
Freight train mileage per mile of road	3,962	Dec.	179
Freight earnings per freight train mile	$1.98	Inc.	$0.31

*Includes mileage made by light trains.

PASSENGER TRAFFIC STATISTICS.

ALL LINES OPERATED DIRECTLY.

	1901.	Inc. or dec.	
Miles	1,506.6	Inc.	30.4
Passenger earnings	$2,826,813.39	Inc.	$145,737.02
Per cent. of gross earnings	17.5	Dec.	2.5
Number of passengers carried	2,630,574	Inc.	94,045
Number of passengers carried one mile	142,494,488	Inc.	6,642,474
Average miles each passenger was carried	54		.....
Number of passengers carried per mile of road	1,746	Dec.	3
Number of passengers carried one mile per mile of road	94,580	Inc.	1,825
Passenger earnings per mile of road	$1,876.28	Inc.	$46.32
Average earnings from each passenger	$1.07	Inc.	$0.01
Average earnings per passenger per mile (cents)	1.984	Inc.	.011
Average number of passengers per train	51	Inc.	1
Passenger train mileage	2,793,955	Inc.	70,727
Passenger car mileage	14,399,721	Inc.	629,158
Passenger train mileage per mile of road	1.854	Dec.	4
Earnings per passenger train mile	$1.20	Inc.	.01
Passenger earnings per train mile	$1.01	Inc.	.03

GENERAL REMARKS.

The Income Account of your Company shows a gratifying increase in the earnings, the net income amounting to $2,001,897.04, out of which has been taken for extraordinary expenditures, covering new equipment and construction, $1,304,171.78. In addition there was expended for second track, branch lines and improvements at Richmond, including real estate, $1,398,594.69, out of funds provided by 4½ per cent. bonds referred to in last Annual Report.

On January 1, 1901, changes in operating Divisions were made as follows:

The Peninsula, Washington and James River Divisions were abolished, the two first-named attached to the Richmond Division, also the Rivanna District of the James River Division; the Mountain District of the Richmond Division was detached, and with the Alleghany (now James River) District of the James River Division, formed into the Clifton Forge Division; the Cincinnati, Lexington, Louisville and Big Sandy Divisions were consolidated and named the Kentucky Division.

On that date the Greenbrier Railway was completed to Marlinton, 56.2 miles from Whitcomb, and on June 1 to Cass, 80.8 miles. The grading and bridging on the remaining fourteen miles is completed, and tracklaying should be completed by November 1. This line will be leased to your Company and operated as the Greenbrier Division.

The Piney Creek Branch (Prince to Raleigh, 13.6 miles) was completed and placed in operation July 1, 1901; also the Guyandot Valley Railway from Barboursville to Midkiff, 26.5 miles.

The Greenbrier & New River Railroad extension, on the south side of New River, is completed except the laying of the rails, and should be in operation October 1.

The completion of these various lines, also the second main track under construction at the beginning of the year, has been seriously delayed by the unprecedented rainfall during the spring months, causing numerous slides and washouts both on the main and branch lines, adding greatly to the cost of constructing the new lines and the expense of maintaining existing lines.

The track elevation through Richmond is practically completed; the Union Passenger Station is under construction, and it is expected that it will be ready for occupancy by the joint owners—the Seaboard Air Line Railway and the Chesapeake & Ohio Railway—on November 1.

Greenbrier Railway 4 per cent. forty-year sinking fund gold bonds, guaranteed by the Chesapeake & Ohio Railway Co. to the amount of $2,000,000, were sold during the year at a satisfactory price, and the proceeds in part applied to the reimbursement of your treasury for advances, and the remaining funds to the cost of completing the line.

Greenbrier & New River Railroad 5 per cent. bonds, also guaranteed by your Company to the amount of $111,000, were issued to cover advances made for construction purposes, leaving $2940.72 still due on this account. These $111,000 bonds, with the $52,000 issued the previous year and $31,000 already in the treasury, are deposited with your Treasurer.

Contracts were made for 25 freight locomotives and 1000 freight cars, to cost $1,140,677.50, delivery to be made in August and September, 1901. Of this amount $140,677.50 is to be paid in cash, and the balance is provided for by the sale of $1,000,000 4 per cent. Ten-Year Car Trust certificates, payable one-tenth annually.

The Glen Jean, Lower Loup & Deep Water Railroad—a coal branch 3.6 miles in length, intersecting with your Loup Creek Branch near Glen Jean Station—was purchased for the sum of $75,100, and the capital stock (751 shares) deposited with the Central Trust Co., in compliance with the terms of the General Mortgage. This line will, in a few months, produce a large additional coal tonnage.

The discount on the General Mortgage 4½ per cent. bonds sold during the year, amounting to $68,062.50, was charged to Profit and Loss.

The usual purchase of the debentures of the Chesapeake & Ohio Steamship Co., Limited, was made, requiring the sum of $48,551.50; in addition, $34,703.02 was advanced on account of loss in operation. The above amounts appear as deductions from Income.

The Coastwise Steamship Co.'s fleet was leased to the Chesapeake & Ohio Coal Agency Co. for a period of one year from July 1, 1901, for an amount believed to be sufficient to pay the insurance, repairs and the interest on the bonds held by your Company. One of the tugs belonging to this fleet was sold during the year, and the amount received will be applied to the reduction of the Coastwise Company's bonds.

Your directors call attention to the increase in coal and coke tonnage of 15 per cent., the decrease in other freight of 6.2 per cent., the combined tonnage (10,125,497) showing an increase of 3.9 per cent. Revenue ton miles increased 3.5 per cent.; the revenue per ton per mile was 3.88 mills, an increase of 13.1 per cent.; the train revenue per mile was $1.98, an increase of 18.6 per cent. The average train load was 511 revenue tons, an increase of 4.7 per cent.; including Company's freight, it was 533 tons. Miles run by freight trains decreased 1.3 per cent. There was an increase of 3.7 per cent. in the number of passengers carried; the number per train averaged 51, an increase of 2 per cent., and the revenue per train per mile was $1.20, an increase of 3.4 per cent.

There were purchased to be laid in the main tracks 22,231 tons of new steel rail, equal to 164 miles; in addition, 3465 tons, equal to 24 miles, for new second track and Richmond improvements—a total of 25,696 tons. The main lines are now laid with rails weighing from 70 to 100 pounds per yard, as follows: 100-pound, 201 miles; 75-pound, 837 miles; 70-pound, 115 miles—total 1153 miles. In maintaining existing tracks 744,855 ties were used, and in the construction of second track and sidings 40,649, a total of 785,504 ties, and 228,549 yards of ballast.

The overhead bridge at Twenty-eighth street, Newport News (the expense for which is borne equally by the city and the railway company), is now in course of erection, $39,015.66 having been advanced by your Company toward this improvement during the year and charged against Income.

With the exception of two short trestles across the Chickahominy swamp, near Roxbury, Va., the main line from Newport News to Cincinnati is provided with permanent bridges and culverts. Improvements of this character are under way on the less important lines, and at the present rate of progress should be completed within the next two years.

Three iron bridges, consisting of fourteen spans, 1695 lineal feet, have been replaced by new steel structures capable of carrying the heaviest equipment; the feeding yard, for stock en route, was transferred from Stock Yards Station to Hinton, new and modern pens having been built at the latter point; an addition was made to the machine shop at Huntington and the same equipped with new tools; new icehouses were built at Clifton Forge and Huntington; a smallpox hospital, an air-testing plant and a steam testing plant at Clifton Forge; a new car barge purchased to operate between Ashland and Ironton; an extensive change of line made at Snowden, and a portion of Mann's Tunnel, near Fort Spring, taken out; new poles were provided for 62 miles of telegraph line, and 98 miles of new wire placed.

All of the above was charged to Operating Expenses.

Extensive repairs were made to 268 locomotives (an increase of 20.2 per cent.) and to 201 passenger cars. The average amount expended for repairs per locomotive owned was $1440.67, an increase of 2 per cent.; per passenger car $742.69, an increase of 13.7 per cent., and per freight car, $52.39, an increase of 7.8 per cent.

All of the freight car equipment is provided with automatic couplers and 71 per cent. with air brakes. The average capacity of revenue freight car equipment is 30.9 tons, an increase of two tons.

December 7, 1900, your Company was deprived by death of the valuable services of one of the Directors, Mr. Horace J. Hayden. Appropriate resolutions were passed by the Board at its next meeting, December 11, 1900, and appear in this report. Mr. Samuel R. Callaway was elected a Director and member of the Executive Committee to succeed Mr. Hayden. July 10, 1901, Mr. Callaway resigned from the Board, and was succeeded by Mr. William H. Newman.

April 23, 1901, Mr. N. Parker Shortridge resigned, and was succeeded by Mr. John P. Green.

January 1, 1901, Mr. C. E. Doyle, General Superintendent of the Eastern Division, was appointed General Manager, and Mr. C. C. Walker, Superintendent of the Richmond Division, was appointed to succeed him.

Mr. J. W. Knapp, Superintendent of the Huntington Division, was transferred to the Richmond Division; Mr. J. H. Carlisle, Superintendent of the Clifton Forge Division, to the Huntington Division; Mr. H. C. Boughton, Superintendent of the Lexington and Louisville Divisions, to the Greenbrier Division; Mr. George W. Lewis, Superintendent of the Cincinnati Division, was appointed Superintendent of the new Kentucky Division, and Mr. E. W. Grice, Superintendent of the Clifton Forge Division.

The General Balance Sheet and statistical data are appended hereto, to which attention is directed.

The Board of Directors renew their acknowledgment to the officers and employes for the fidelity and efficiency with which they have performed the duties entrusted to them during the year.

By order of the Board,

GEO. W. STEVENS,
President.

RESOLUTIONS ADOPTED BY THE BOARD OF DIRECTORS DECEMBER 11, 1900.

Resolved, That in the death of the late Horace J. Hayden his associates upon this Board have lost a loyal friend and an earnest colleague and the Executive Committee a careful adviser.

In the business of the Board he was prompt, sagacious and thorough; he possessed the absolute confidence of his associates; his integrity was granitic, and his charming manners endeared him to all who were brought in contact with him.

Resolved, That as an expression of the confidence, esteem and affection he inspired these resolutions be duly entered upon the minutes of this meeting, and a copy of the same sent with the profoundest sympathy of this Board to Mrs. Hayden.

GENERAL BALANCE SHEET, JUNE 30, 1901.

ASSETS. DR.			Comparison with June 30, 1900. Increase.	Decrease.
Cost of Road and Equipment		$112,047,401 45		$13,714,768 36
Greenbrier & New River Railroad				152,600 00
Bonds owned	$12,022,418 19			
Stocks owned	4,898,757 41			
Miscellaneous Securities	231,076 08			
		17,152,251 68	$14,424,243 19	
Advances to Controlled Companies		1,494,020 96	1,494,020 96	
Sundry Construction Accounts		120,851 31	92,035 22	
Norfolk Terminal Property				43,783 61
Real Estate				35,338 49
Special Cash Deposit (unexpended balance of Construction Fund)		111,636 26		219,600 49
Total Invested Assets		$130,926,161 66	1,544,808 42	
Cost of 5900 Freight Cars, less amounts charged to Operating Expenses		3,033,410 51	1,436,047 30	
Current Assets:				
Cash in hands of Treasurer	602,726 71		144,905 84	
Special Cash Deposit to pay Matured Coupons	226,443 71		15,165 24	
Special Cash Deposit—Dividend Account	3,184 00		1,219 00	
Due from Agents and Conductors	226,433 64		84,851 86	
Due from Coal Agencies				320,888 80
Due from Railways	362,295 60		27,557 35	
Due from Individuals and Companies	463,908 74			83,072 44
Material and Supplies	689,643 73		286,149 01	
Bills Receivable	22,767 13			113,933 90
Advances to Greenbrier Railway				771,554 49
		2,597,403 26		749,601 33
Total		$136,556,975 43	2,231,254 39	

LIABILITIES. CR.			Comparison with June 30, 1900. Increase.	Decrease.
Capital Stock, Common	$60,529,500 00		$1,700 00	
Capital Stock, First Preferred	11,700 00			$1,900 00
Capital Stock, Second Preferred	900 00			800 00
		$60,542,100 00		1,000 00
Funded Debt:				
5% 1st Con. Gold Mtge. Bonds, due 1939	$25,858,000 00			
4½% Genl. Mtge. Gold Bonds, due 1992	28,824,000 00		1,516,000 00	
6% Series A Gold Bonds, due 1908	2,000,000 00			
6% Series B (and Script) Bonds, due 1908	13,354 17			
6% Gold Bonds, due 1911	2,000,000 00			
6% Gold Bonds, due 1922	142,000 00			
4% 1st Mtge. Gold Bonds, R. & A. Div., due 1989	6,000,000 00			
4% 2d Mtge. Gold Bonds, R. & A. Div., due 1989	1,000,000 00			
5% 1st Mtge. Gold Bonds, E. L. & B. S. R. R., due 1902	3,007,000 00			
5% 1st Mtge. Gold Bonds, Craig Valley Branch, due 1940	650,000 00			
5% 1st Mtge. Gold Bonds, Warm Spring Branch, due 1941	400,000 00			
G. & N. R. R. R. Gold Bonds				422,000 00
		69,894,354 17	1,094,000 00	
Total Capital and Funded Debt		$130,436,454 17	1,093,000 00	
Balance due on purchase of 5400 Freight Cars		2,161,145 08	916,890 90	
Current Liabilities:				
Interest accrued on Funded Debt	808,674 38		39,469 16	
Unpaid Coupons, including Coupons due July 1, 1901	226,443 71		13,632 74	
Dividends uncollected by Shareholders	3,184 00		1,219 00	
Pay-Rolls and Vouchers	1,150,361 60		97,797 60	
Sundry Accounts	67,640 16			272,224 50
Due to Railways	142,585 47		16,210 61	
Due to Individuals and Companies	46,124 54		5,059 90	
Temporary Loan	300,000 00		300,000 00	
Taxes accrued, not due	152,037 24		18,215 68	
		2,897,051 10	219,380 19	
Profit and Loss		1,032,325 08	1,983 30	
Totals		$136,556,975 43	2,231,254 39	

This Company is also liable as guarantor of the—

Norfolk Terminal & Transportation Co., 1st Mortgage	$500,000 00
C. & O. Grain Elevator Co., 1st Mortgage	830,000 00
Greenbrier & New River R. R., 1st Mortgage	533,000 00
Greenbrier Railway Co., 1st Mortgage	2,000,000 00
Passenger & Belt Railway Co., 1st Mortgage	150,000 00
Louisville & Jeffersonville Bridge Co., 1st Mortgage (C. C. C. & St. L., ⅔; C. & O., ⅓)	3,000,000 00
C. & O. Steamship Co., Ltd., 1st Mortgage (amount outstanding)	£80,000 00

Where $30 Saved $10,000.—It is not often that an investment of $30 realizes the investor $10,000, but this is what the Gonzales Fish & Oyster Co. of Mobile, Ala., believes. Some time ago the company was induced to cover its plant with the famous Lythite Cold Water Paint, having heard of its durability and value as a protection from the weather. A representative of the Frank S. De Ronde Co. further guaranteed that Lythite is strictly fireproof. Possibly the Gonzales Company thought little of this at the time, but later, when a fire destroyed buildings within five feet of its plant and its own buildings were not burned, it was given such a proof of the claim that it addressed a letter to the Southern Supply Co. of Mobile, agents for Lythite, which read as follows: "Through extreme gratitude, to the extent of about $10,000, towards the manufacturers of 'Lythite' Cold Water Paint, and yourselves as agents for the same, we are prompted to write you this letter. The multitude which this morning eagerly watched the fire which totally destroyed the premises of the Ollinger & Bruce Dry-Dock Co., and that of the National Dredging Co., wondered how it was that our buildings, being only five feet from those burning, and being swept by the flames, did not catch fire. What thus seemed a miracle to many may be solely traced and attributed to the fact that when we erected our new wholesale departments in the spring we coated them with Cold Water 'Lythite' Paint. As further evidence of the good properties of the paint in question may be stated the fact that the flames brought out the rosin from the pine, but the paint prevented the lumber from igniting. We consider this the best investment we have ever made, and have no hesitancy in making it known, as $30 worth of this red 'Lythite' paint has today saved us in the neighborhood of $10,000, the estimated value of our property." Perhaps Lythite has not had such an extreme test as this before in its career, but the many manufacturers and others who have already used it have found it to be exactly as represented. This is one reason why the De Ronde Company has been obliged to move to No. 46 Cliff street, New York, in order to increase its facilities for supplying the compound.

Oil for Smelters.

There is a possibility that Texas oil may be used in the plants of the American Smelting & Refining Co. Tests have been made at Perth Amboy, N. J., where one of the largest reduction works in the country is located, it is claimed, with satisfactory results. Among those who have become interested in the idea is Mr. Daniel Guggenheim, who was instrumental in constructing the large silver smelter in Mexico, also the plant at Perth Amboy. Mr. Guggenheim is chairman of the board of directors of the company, which represents an American consolidation of smelters.

An entire preliminary sample number of Country Life in America, a new magazine yet to be regularly published, is an unusual experiment and an expensive one as well. Yet Doubleday, Page & Co. have prepared an advance sample issue to make sure that nothing will be left undone to make the magazine attractive when it finally is sent forth. They believe the beauty and scope of a magazine founded on such new lines cannot be realized until it is seen.

The Southern Pacific Railway Co. has placed its first oil-burning engine in service between Houston and Galveston. The officials have found that with 675 gallons of oil as much steam can be produced as with four and one-half tons of coal, and that the combustion of the oil is attended with satisfactory results. Steam can be raised more quickly than with coal, and as high a rate of speed attained.

During August there were mined at the Brushy Mountain mines in Tennessee 21,446.65 tons of coal, while the coke ovens turned out 4712.90 tons of coke.

On one day last week vessels representing seven foreign nations were in Galveston harbor.

FINANCIAL NEWS.

The Manufacturers' Record invites information about Southern financial matters, items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

New Corporations.

W. T. McKee and others have formed the Lone Star Insurance Co. at San Antonio, Texas.

Simon Lederer is interested in the State bank recently organized at Poplar Bluff, Mo., capitalized at $25,000.

The First National Bank, recently organized at Andalusia, Ala., has been authorized to begin business with $50,000 capital stock.

The Bank of Comanche has been organized at McKnight, Okla., with $5000 capital stock, by Robert L. Reid of McKnight and others.

A bank has been organized at Lake Village, Ark., with $25,000 capital stock. H. Thane has been elected president, and C. R. Symons, cashier.

John M. Nimocks is interested in the American Aid and Benefit Association, recently organized at Meridian, Miss., with $10,000 capital stock.

The Sumter Savings Bank of Sumter, S. C., has been organized, with $25,000 capital stock. Horace Harby has been elected president, and George L. Richer, cashier.

The Lumberton Building and Loan Association has been organized at Lumberton, N. C., with R. M. Norment, president, and D. W. Millsaps, secretary and treasurer.

The bank recently organized at Blacksburg, S. C., will open for business on October 8. D. F. Morrow is president, and M. H. Morrow, cashier. The bank is capitalized at $30,000.

The national bank recently organized at Purcellville, Va., will begin business in October with $40,000 capital stock. W. P. Pancoast is president, and George E. Plaster, vice-president.

New Securities.

The town of Calhoun, Ga., has voted in favor of issuing $5000 in bonds for improvements.

C. W. Waggoner will receive bids until October 15 for the issue of $10,000 in 6 per cent. school bonds in Lakeland, Fla.

S. A. Kean of Chicago has purchased the issue of $6000 improvement bonds placed on the market by the town of Gallatin, Tenn.

The town of Sardis, Miss., will receive bids for $15,000 in 5 per cent. bonds for water-works system. A. W. Shand may be addressed.

The town of Farmington, Mo., has voted in favor of issuing $25,000 in bonds for improvement purposes. The town clerk may be addressed.

The issue of $125,000 in bonds of the city of Newport News, Va., is now on the market, and bids are being received. The mayor may be addressed.

Bids will be received until October 21 for the issue of $8000 in 5 per cent. bonds of Jacksonville, Fla. H. L. Stevenson, mayor, may be addressed.

It is announced that the town of Cloverport, Ky., will vote on the question of issuing $8500 in bonds for improvements. The mayor will give further information.

The issue of paving bonds to be sold by the city of Mobile, Ala., amount to $65,000, and will bear 4 per cent. interest. Bids will be received until October 10. T. S. Fry is mayor.

The citizens of East Carroll parish, Louisiana, have voted in favor of issuing $16,500 in 5 per cent. bonds for improvements. The police jury may be addressed at Lake Providence, La.

The Gaslight Company of Augusta, Ga., has given a mortgage to the North American Trust Co. to secure an issue of $300,000 in 5 per cent. bonds for refunding purposes and improvements.

SOUTHERN COTTON-MILL STOCKS.

Quotations Furnished by Hugh MacRae & Co., Wilmington, N. C., for Week Ending September 24.

	Bid.	Asked.
Abbeville Cotton Mills (S. C.)	...	91
Aiken Mfg. Co. (S. C.)	90	93
American Spinning Co. (S. C.)	...	103
Anderson Cotton Mills (S. C.)	120	130
Arkwright Mills (S. C.)	117	...
Augusta Factory, (Ga.)	70	73
Avondale Mills (Ala.)	82½	...
Belton Mills (S. C.)	102	...
Bennettsville Mfg. Co. (S. C.)	...	100
Cabarrus Cotton Mills (N. C.)	120	130
Clifton Mfg. Co. (S. C.)	175	...
Clinton Cotton Mills (S. C.)	121	...
Courtenay Mfg. Co. (S. C.)	117	120
Dallas Mfg. Co. (Ala.)	90	100
Darlington Mfg. Co. (S. C.)	...	96
Eagle & Phenix Mills (Ga.)	100	...
Enoree Mfg. Co. (S. C.)	...	113
Enterprise Mfg. Co. (Ga.)	...	100
F. W. Poe Mfg. Co. (S. C.)	116½	120
Gaffney Mfg. Co. (S. C.)	113	116
Granby Cotton Mills (S. C.)	100	...
Granby Cotton Mills (S. C.) 1st Pfd.	106	...
Graniteville Mfg. Co. (S. C.)	160	165
Greenwood Cotton Mills (S. C.)	100½	101
Grendel Mills (S. C.)	100	104
Henderson Cotton Mills (N. C.)	120	125
Henrietta Mills (N. C.)	...	200
John P. King Mfg. Co. (Ga.)	95	97½
Langley Mfg. Co. (S. C.)	104	110
Laurens Cotton Mills (S. C.)	139	145
Lockhart Mills (S. C.)	...	107½
Loray Mills (N. C.)	...	86
Louise Mills (N. C.)	...	100½
Lynchburg Cotton Mills (Va.)	125	130
Lynchburg Cotton Mills (Va.) Pfd.	145	150
Manchester Cotton Mills (S. C.)	...	114
Mayo Mills (N. C.)	150	...
McColl Mfg. Co. (S. C.)	...	100½
Newberry Cotton Mills (S. C.)	113½	...
Orr Cotton Mills (S. C.)	...	102
Pacolet Mfg. Co. (S. C.)	...	200
Pelzer Mfg. Co. (S. C.)	172	180
Piedmont Mfg. Co. (S. C.)	...	180
Raleigh Cotton Mills (N. C.)	116	...
Richland Cotton Mills (S. C.)	104	107
Richland Cotton Mills (S. C.) Pfd.	100	104
Roanoke Mills (N. C.)	90	100
Sibley Mfg. Co. (Ga.)	75	78
Southern Cotton Mills (N. C.)	96	100
Spartan Mills (S. C.)	130	138
Trion Mfg. Co. (Ga.)	125	135
Tucapau Mills (S. C.)	128	...
Union Cotton Mills (S. C.)	...	148
Union Cotton Mills (S. C.) Pfd.	100½	105½
Victor Mfg. Co. (S. C.)	106	...
Warren Mfg. Co. (S. C.)	90	...
Warren Mfg. Co. (S. C.) Pfd.	105	...
Washington Mills (Va.)	100	100½
Whitney Mfg. Co. (S. C.)	...	120
Wilmington Cot. Mills (N. C.) Pfd.	100	105
Wiscassett Mills (N. C.)	115	...

Lake Borgne Canal.

In its annual report, compiled by Mr. Fred Muller, the Maritime Association of New Orleans contains a mass of valuable statistics bearing upon the railroad facilities and the commerce of the port, and sums up the advantages of the completion of the Lake Borgne canal as follows:

"It will shorten the distance by water from New Orleans to the Gulf ports east of the Mississippi.

"It will bring shipments from the Gulf-coast points directly to the levee at New Orleans.

"It will save the transshipment of through freights, the cartage and frequent handling of which now costs several hundred thousands of dollars annually.

"It will make New Orleans the greatest lumber mart in the world.

"It will enable the seagoing vessels, drawing from ten to twelve feet of water, to sail within twenty miles of New Orleans, saving all such craft the present cost of towage.

"It shortens by sixty miles the distance by direct water navigation to the deep water of the Gulf.

"To the consumers of coal it will mean much cheaper fuel."

Humming at Henderson.

A letter from Henderson, N. C., says: "Our town is humming with various new enterprises. The cotton mills, the knitting mill, the buggy factory, the ice factory and the steam laundry make things lively, and all do a very good business."

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Pennsylvania Railroad Special Excursions to Pan-American Exposition.

The Pennsylvania Railroad Co. will run special excursions to Buffalo on account of the Pan-American Exposition from Baltimore and adjoining territory on September 26, October 2, 8, 17, 23 and 29. Round-trip tickets, good going only on special train leaving Baltimore, Union Station, 9.05 A. M., and York 10.43 A. M., and on local trains connecting therewith, and good to return on regular trains within seven days, including day of excursion, will be sold at rate of $10 from Baltimore, and proportionate rates from other points. Tickets will be good for passage in parlor cars and sleeping cars on payment of usual Pullman rates. Stop of thirty minutes will be made at Williamsport for luncheon. For specific time and rates, consult local ticket agents. †

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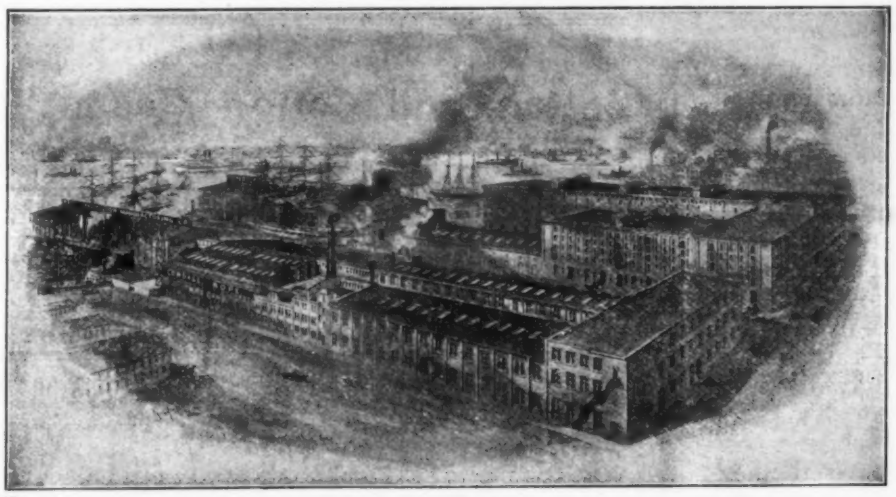

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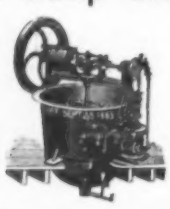

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PROPOSALS.

TREASURY DEPARTMENT, Office of the Supervising Architect, Washington, D. C., September 23, 1901.—Sealed proposals will be received at this office until 2 o'clock P. M on the 7th day of November, 1901, and then opened, for the general construction of the U. S. Custom House at New York N. Y., in accordance with the drawings and specifications, copies of which may be had, at the discretion of the Supervising Architect, on application to this office or the office of the Architect, Cass Gilbert, 111 Fifth Avenue, New York, N. Y. Applications must be accompanied by a certified cheque for $250, which will be held at this office until the return of drawings and specifications. JAMES KNOX TAYLOR, Supervising Architect.

SEALED PROPOSALS.—Sealed proposals will be received by the Bridge Committee until 2 o'clock P. M. October the 5th, 1901, at the Court House in Lawrenceburg, Lawrence County, Tenn., for the construction of a Steel Highway Bridge across Shoal Creek at Iron City, Tenn., 3 spans aggregating 324 feet, 100 feet steel approach, 12 feet roadway, stone piers. Certified check for $500 required of bidders. Lawrence County will pay $2000 cash when bridge is received by Committee. The remainder in one and two years with 5 per cent. interest, reserving the right to pay at any time.

Also at the same time and place sealed bids will be received for the construction of masonry, supposed to be about 300 cubic yards. Plan and specifications of both bridge and masonry on file. The right to reject any or all bids is reserved. F. M. CANNON, Chr. Com., Lawrenceburg, Tenn.

THE Board of Supervisors of James County, Miss., at their September meeting, solicited bids for the placing of two new steel cells in the County Jail at Ellisville, Miss. Said bids to be filed by the first Monday in October, 1901.

BRIDGE.

The Board of Supervisors of Pittsylvania County, Virginia, will, at their meeting on the 10th day of October, 1901, at Chatham, Va., receive sealed bids for building, ready for travel, either an iron or covered wood bridge across Rigg River, at the Canada Ford, which is about fifty yards wide, including a trestle approach on the south side of 30 or 40 yards. Usual bond required of contractor.

Right to reject any or all bids is reserved. Each bidder will submit his own plan and specifications.

Parties desiring to view the site can come to Chatham, Va., or to Sandy Level, on the Franklin & Pittsylvania Railroad, and procure conveyance.

For further information address GEORGE T. RISON, Chatham, Va.

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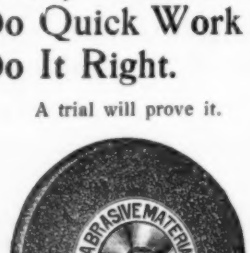

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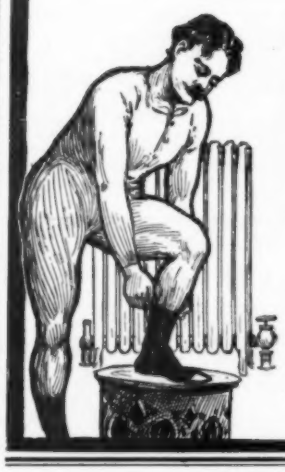

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Ads. marked * appear every other week. Ads. marked † appear in first issue of the month. Ads. marked ‡ not in this issue.

For Classified Index See Pages 3, 5, 7, 9, 11, 13, 15 and 17.

A

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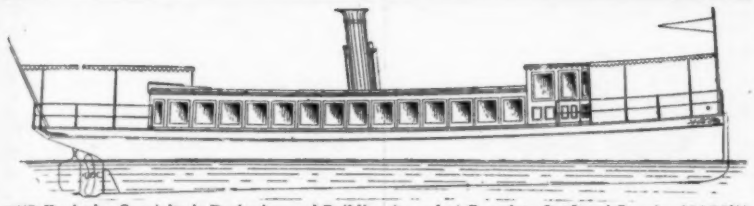

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1 25-ton Standard Gauge Switcher, with slope back tender and air brake.
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All in good running order.

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14" Keystone Matcher.
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FLATS & BARS up to 20 in. wide.
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No.	H.P.	Maker.	Cylin.	Speed.	Whls.
2	150	Buckeye "C"	14½x16	240	72x15
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1	125	"	11&19x11	300	
2	75	"	12x11	300	
1	75	N. Y. Safety	12x12	300	
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Second-hand Double Cage Disintegrator,
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3 16 in. and 27 in.x16 in. Westinghouse compound.
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2 12"x12" Ball automatic.
2 13 in.x14 in. Watertown automatic.
1 14 in.x13 in. Armington & Sims automatic.
1 15½ in.x16 in. New York safety automatic.
3 15½ in.x15 in. Armington & Sims automatic.
2 16 in.x16 in. Ball automatic.
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110, 220, 500-volt motors, from 1 H. P. to 200 H. P.

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Largest Assortment. Immediate Delivery.
Send for Catalogue.

1 30"x60" Greene Engine.
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1 16½"—32"x36" Fitchburg Cross Compound.
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1 13"—20"x16" McEwan Tandem Comp. Engine.
2 17"x30" Williams Automatic Engines.
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2 15½"x15" Armington & Sims Engines.
1 15"x30" Buckeye Automatic Engine.
1 14"x15" Ideal Engine.
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14 Water Tube Boilers, 165 to 200 lbs. steam pres.
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Several full Railway Equipments.

Large stock of Machine Tools. Let me know your wants.

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2 Band Saw Mills, 1 Brick Plant, 1 Endless Rope Mine Haulage Plant, 4 10-ton Shay Geared Locomotives, 18 standard gauge Flat Cars, Boilers, Engines, Rail and Equipment.

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ICE MACHINES.

One 75-ton, Vilter.
Two 15-ton machines.
One 10-ton machine.

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Vertical, Tubular and Fire-box, all sizes.

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One 10x15 Buckeye, automatic.
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One 10x7x10 Smith-Vaile.
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WOODWORKING MACHINERY.

One 24" Buss Machine Works Planer.
One 30" 3-roll Perry Sander.
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One 24" Surf cer, incline bed.
One Double spindle Shaper.

Write for prices before purchasing elsewhere.

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Can Ice Making Machinery,

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complete with 2 Compound Compressors, 30 ton each. Distilling Tanks, Receivers, Boilers, all Piping, Dynamo and Engine for Electric Lighting and Driving Travelling Cranes for handling cans. About 1500 cans, used 2 years, and can be bought right, either to be used on premises or removed. For full particulars, address,

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22"x42" Wright Corliss.
14"x30" Horizontal Slide Valve.
10"x20" Supplee Horizontal.
8"x 7" Upright Yoke Engine.
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For sale cheap. For further particulars and prices apply to

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For Sale—Engines, Boilers, Dynamos, &c.

1 700-light **Dynamo,** 110 volts, $335. Also some smaller dynamos down to 30-light machines. **Engines**—1 50 H. P., $300. 1 100 H. P., $425. 1 125 H. P., $690. 2 150 H. P., $750 each. 2 350 H. P., $2250 each. Also some others. Feed Water Heater, Berryman, about 700 H. P., $250. Alternating Dynamos—600-light, $285. 2 1300-light, $385 each. Boilers, Pulleys, Pipe Shafting, etc. Some big bargains. Generator—100 H. W., 550 volts, slow speed, $675.

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Steam Fitting and Machine Shop.

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One 8-horse power Upright Engine,
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One 11-horse power Upright Boiler.

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1-36"x36"x7' Sellers Planer with one side head.
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1-800 lbs Merrill Drop Hammer.
1-Bulldozer.
1-24" Gisholt Turret Lathe.
1-28" " " "
1-48"x24' Triple geared Engine Lathe.
1-20"x21' Johnson Engine Lathe.
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One practically new 20x60 Harris-Corliss $1500.
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Two 150 H. P. Manning Vertical Boilers, insurable at 115 lbs., $500 each.
Three 60x20' 8" Hor. Tubular Boilers, 76-3¼" tubes, insurable 125 lbs., double strapped, $400 each.
127'-40" 12-ply Giant Brand Revere Belt, never used.
One Cyclone Dust Collector, 18"-60".

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2 120-h. p. 66"x18' Tubular Boilers.
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1 60-h. p. 54"x14' " " "
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1 13½x10x18 Smith-Vaile Single Pump.
1 12-in. Centrifugal Wrecking Pump with Direct Connected Engine.

Also a large number of Smaller Engines, Boilers, Pumps, Heaters, etc.

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1 3-sided Planer and Matcher, Frank, $175. 1 38" Connell & Dengler Circular Re-saw, $1.25. 1 42" 3-roll Egan Sander, $400. 1 30" Single Drum Sander, $45. 2 20" Pony Planers, each, $65. 1 24" Single Surfacer, $100 4 Engines. 2 Boilers.

Write for complete list.

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FOR SALE.

150 Knowles Looms, 40 inch reed, 25 harness, 4x4 box, all nearly new.

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General Electric, three phase, sixty cycle, Inductor Motors

1 15-H. P. 110 volt, speed 900, price $350.00
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1 75-H. P. 550 volt, speed 600, price $1100.00

Chicago delivery, ready to ship. Hundreds of other bargains in stock. **GUARANTEE ELECTRIC CO.**
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Chas. E. Gregory, President.

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100 h. p. 12x24 Buckeye Automatic.
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150 h. p. 14x30 Cummer 4 valve Automatic.
250 h. p. 12x22x18 Payne Tandem Cpd. Auto.
65 h. p. 12x24 Cooper Slide Valve.
50 h. p. 12x18 Slide Valve.
14x7x10 Smith-Vaile Fire Pump.
200 h. p. Baragwanath Heater.
45 h. p. 11½x18 Slide Valve.
60x16 ft. Tubular Boiler.
200 h. p. Stillwell-Bierce Heater.

The above are all in first-class condition and ready for shipment.

A. L. DAWSON & CO.,

27-31 W. Washington St., CHICAGO, ILL.

Second-Hand Machinery

For Immediate Delivery at Bargain Prices.

1 T. H. 110 volt Generator, 50 K. W., perfect order, $450.00.
1 T. H. 110 volt Generator, 30 K. W., perfect order, $270.00.
1 Buffalo Steam Pump Co.'s Compound Duplex Pump, size 12 and 18½ by 10½ by 12, perfect order, $500.00.
Corliss Automatic Slide Valve Engines, Boilers, Pumps, Heaters, Iron and Woodworking Tools.

WISCONSIN MACHINERY CO.

125-127 W. Water Street, Milwaukee, Wis.

Contractors' Outfit

FOR SALE.

1 1000-ft., 1¼-in. Sherman Cableway, with Lambert engine, complete.
Stiff Leg, Guy and Breast Derricks, hand and steam power.
Traveling Derrick, Byer's.
Concrete Mixer, power.
Horizontal Boiler, 40 H. P.
"New Ingersoll" Drills E 9, new and second-hand.
Pile Driver. Bucyrus Dredge.
Austin "New Era" Graders and Dump Wagons, slightly used
Wheel and Drag Scrapers, used less than one month.
Horse and Mule Harness.
Pipe Fitting and Machine Shop Outfit.
Plows, Shovels, Small Tools, etc.

Machinery located at Trenton Falls, N. Y.; Rome, N. Y., and Wyoming, Ill.

For particulars, enquire of

The Warren-Burnham Co.,

81 Fulton St., New York City.

BARGAINS

IN SECOND-HAND MACHINERY.

One Marion Style "A" steam shovel with 1½ yard dipper.
One 18½x24 standard gauge locomotive.
Five 16x24 standard gauge locomotives.
One 42" gauge Porter saddle tank locomotive.
Several engines from 5 to 800 h. p., also boilers.
Several crushers and crushing plants; all sized piping.

Let us know your wants in the machinery line.

GRANT & WILLIAMS,

Park Row Building, NEW YORK.

New and Second-Hand

Iron Tools and Woodworking Machinery

Corliss and Double Valve Engines for Trolley Roads and Electric Lighting Stations.

H. C. BAKER & CO.,

114 N. 3d Street, Philadelphia, Pa.

FOR SALE.

POPLAR STRIPS ¾ to 1-in. thick, 1 to 2½-in. wide, 12, 14 and 16 ft. long, some 10 ft. long. Practically all clear, saps and hearts.

POPLAR BOX BOARDS ends, dressed two sides; ¾ and ⅞-in. thick, 4 in. to 18-in. wide, 4 in. to 18-in. long, in car loads.

Offer your best prices, f. o. b. Florence or delivered.

Florence Wagon Works, Florence, Ala.

FEED-WATER HEATERS

2nd-Hand 80, 160 and 250 h. p. Berrymans, 200 h.p. Goubert, 150 and 600 h.p. Wainwrights, 500 h.p. National, 600 h.p. Stillwell-Bierce Open Heater. All guaranteed. **F. L. PATTERSON, Havemeyer Bld'g, N. Y.**

FOR SALE.

We carry a large line of Engines, both new and second-hand, in stock—cross-compound Corliss, tandem-compound Corliss and simple Corliss from 1500 H. P. down to 75 H. P.

Automatic Engines, every size and make—slide and piston-valve Engines from 1000 H. P. down to 5 H. P.

BOILERS—Water tube, horizontal tubular, locomotive Boilers, etc.

HEATERS—Open and closed heaters, all sizes and makes.

MACHINE TOOLS—Lathes, planers, shapers, drill presses, chucks, emery wheels, power punches, etc.

BLOWERS, Exhaust fans, shafting, pulleys, hangers, valves, governors, belting and pipe.

PUMPS—All sizes and makes from 3,000,000 gallons down.

CONDENSERS—Deane, Nordberg, etc.

ELECTRICAL MACHINERY.

1 600-light Edison incandescent dynamo.
2 400-light Edison incandescent dynamos.
1 60-light Thomson-Houston incandescent dynamo.
1 65-light Brush arc.
1 60-light Wood arc.
1 50-light Thomson-Houston incandescent dynamo.
1 30-light Brush dynamo.

ROLLING-MILL MACHINERY.

One 18" muck mill, one 18" sheet-bar mill, one squeezer, iron and wooden jib cranes, traveling cranes, rotary shears, hydraulic pumps, floor-plate, buggies, etc.

STEAM HAMMERS.

4000, 1200, 700 and 400 pounds double-legged Morgan.
275 pounds single-legged Kline.

ICE AND REFRIGERATING PLANT.

One pair of Pictet horizontal Ice Machines, consisting of two Corliss Engines, 16"x36", and ammonia Compressor, 10"x36" (ammonia end being new and manufactured by the Vilter Manufacturing Co., Milwaukee, Wis.); capacity of each machine 25 tons ice or 50 tons refrigerating.

The above is a very fine machine, thoroughly overhauled, and has just been sold to us by a Pittsburg firm, who replaced it with a machine of much larger capacity. Price $4500 f. o. b. Pittsburg.

PUMPS—FOR WATER-WORKS.

One Worthington Duplex 25x20x25, rods 3½" diameter, displaces 32,000 gallons per stroke, 110 strokes per minute. Total capacity over 5,000,000 gallons in twenty-four hours. Weight about 40,000 pounds.

WICKES BROS., 45th St. & A. V. Ry., Pittsburgh, Pa.

Main Offices and Works, SAGINAW, MICH.

Branch Offices,
95 Liberty St., NEW YORK.
1214 Marquette Bldg., CHICAGO.

Machinery For Sale

1 45" right-hand upright water-wheel, Hercules make.
1 38" left-hand upright water-wheel, Hercules make.
1 right-hand 18" water-wheel, Leffell make.
48 Jacquard looms, 68" reed space, 4x1 box, made by Lewiston Machine Co.
2 Crompton broad looms, 38" reed space, 4x1 box, 16 harnesses.
4 Knowles P. & P. broad looms, 100" reed space, 4x4 box, 24 harnesses.
1 Klauder skein dyeing machine.
1 skein yarn shaking machine, made by Stott, Rochdale, Eng.
1 Foster cone winder, 76 drums.
17 beamers, made by Cole Bros.
6 double Whitin railway heads.
9 single Whitin railway heads.
3 card top grinders, 30".
1 48" Barney ventilating fan.
1 24" Blackman ventilating fan.
1 30" Blackman ventilating fan.
1 48" Blackman ventilating fan.
1 16x8" Evans cone.
1 24x12" Evans cone.
3 iron bevel gears, 45 teeth, 9" face, 3" pitch, 4½" bore. } Pairs.
2 mortise bevel gears, 50 teeth, 9" face, 3" pitch, 4½" bore. } Pairs.
1 Cottrell & Babcock water-wheel governor.
1 Wood & Light bolt cutter, ¼" to 1½".
1 Wood & Light iron lathe, 14" c 7' bed.
1 wood box dovetailing machine.
1 45" washing machine, 4 compartments, made by the Phenix Iron Foundry.

BATES MFG. CO.

LEWISTON, ME.

John A. Waters & Co.

13½-17½ S. Eighth Street,

RICHMOND, VA.

New and Second-Hand Boilers, Engines, Mining Outfits and General Machinery.

One Complete Stem Fertilizer Plant, including 1 Exhaust Fan, fittings and piping; 90' Chain Belt and Sprocket Wheels; Drier and fittings; Conveyor and belting; 22' Conveyor and fittings; Elevator Sprocket Wheels and Chain Belting; Scientific Attrition Mill, No. 14; Exhaust Fan; 42' Piping; Dust Collector and connections; Reel and fittings; Transmitting Rope Sheave; 1 large Breaker; 1 Combination Breaker; 1 Magnetic Separator; 1 Self Feed Ross Cutter, No. 116; Conveyor and Elevator; 1 30" New American Turbine Wheel, all bearing parts new.

FOR SALE.

Five hundred pieces of Second-hand Iron and Woodworking Machinery, Engines, Boilers, etc. Send for list.

L. F. SEYFERT'S SONS,

437, 439, 441 N. Third St. PHILADELPHIA, PA.

Machinery and Supply Bargains.

We are easily the representative machinery house of America. Our stock is the most extensive to be found anywhere.

All rebuilt motive power that leaves our establishment is in absolutely perfect condition. Our extensive repair shops are replete with every modern facility for correctly turning out second-hand machinery, as good as new for further use.

The Following Items are Offered Subject to Prior Sale:

No. **ENGINES.**

375. 13x12 Ball automatic.
2. 8x14 side crank.
44. 7x10 double cylinder.
45. 10x20 side crank.
46. 9x16 side crank.
48. 8x16 side crank.
53. 1 rotary steam engine.
58. 1 combined Baxter boiler and engine, 15 H. P.
60 13x34 Putnam basin bed auto. engine.
75 20x30 Poppet valve.
76. 18x28 Nicol-Burr.
1044. 16x28 slide valve.
114. 10x14 link motion, right hand.
116. cross compound steam engine, 3x8 & 6x8.
132. 16x24 slide valve.
137. 6 8x12 center crank Tifft engines.
138. 6 9x12 center crank Tifft engines.
148. 12x20x12 Westinghouse engine.
162. 12x16 slide valve.
163. Cross compound Armington & Sims, 13¼ x20½x15.
170. 15 H. P. Kimble automatic.
172. Triple expans'n Triumph 20 H. P. engine.
173. 13x34 Fitchburg engine.
192. 1 New York Safety auto. 11x12 engine.
193. 12x12 Armington & Sims automatic.
206. 14x24 slide valve.
210. 11x10 Westinghouse.
213. 12x24 slide valve.
216. 12x18 slide valve.
217. 15x16 Ball automatic.
219. 11x20x14 McEwen tandem comp. engine.
220. 11x9x11 Westinghouse engine; also size 13x22x13.
222. 14x24x14 Westinghouse engine.
223. 23x36 Wright-Corliss engine.
226. 9x8 Westinghouse.
235. 20x40 Nordburg.
297. 8½x10 Taylor-Beck automatic.
299. 1 pair Williams auto. engines, 500 H. P.
666. 1 engine and centrifugal pump, direct connected, No. 3 Pump.
750. 5x4 Westinghouse, Jr.
846 1 6x7 vertical automatic.
851. 1 7x7 horizontal automatic.
127. 1½ H. P. gasoline.
128. 2 H. P. center crank gasoline.
130. 2 H. P. new upright gasoline.
133. Holliday 4 H. P. gasoline.
154. 2 Otto 30 H. P. gas.
148. 3 4 H. P. Dayton gas or gasoline.
149. 10 6 H. P. Dayton gas or gasoline.
150. 8 9 H. P. Dayton gas or gasoline.
151. 2 12 H. P. Dayton gas or gasoline.
152. 3 14 H. P. Dayton gas or gasoline.
153. 2 18 H. P. Dayton gas or gasoline.

No. **HOISTING ENGINES.**

810. 10x16 double drum, double cylinder Mundy hoisting engine.
755. 11x18 double drum, double cylinder Mundy hoisting engine.
753. 8¼x12 double cylinder, single drum hoisting engine.
377. Locomotive boiler with hoisting rig attached.
108. 8x12 Webster, Camp & Lane double cylinder, single drum.
6x10 single cylinder vertical engine and boiler.
55. 8x12 single cylinder hoisting engine and boiler.
77. 5x7 elevator hoisting engine, double cylinder, with worm gear.
33. 1 elevator hoisting engine, 7x10, double cylinder.
174. 8x12 double cylinder hoisting engine, belt driven.

No. **ELECTRICAL MACHINERY.**

812. 1 30-light arc dynamo.
813. 1 45-light arc dynamo.
814. 1 50 K. W. Westinghouse alternator.
816. 1 50-light arc dynamo.
818. 1 electric elevator hoist with dynamo, on one base, complete.
820. 1 60 K. W. Ft. Wayne alternator.

No. **MISCELLANEOUS.**

8. 1 hand lever gap shear.
15. 1 hand power sidewalk elevator hoist.
19. 2 Raymond ore crushers and pulverizers.
33. 24-in. Jones turbine water wheel.
35. 30-in. " " "
59 1 hand fire engine on wheels.
70. 2 wire straighteners.
321. 1 Hotchkiss belt driven hammer.
330. Buffalo jet condenser—200 h. p.
813 78 5-in. fire plugs.
714. 1 locomotive traveling crane—standard gauge.
105. 1 hand winch.
294. 1 Wells light.
301. 1 small Wells light.
326. 1 ¾ in. Worthington water meter, also 2 3-in. meter.
339. 1 set plate rolls, geared—38-in. wide.
365. Hot blast apparatus with direct connected fan and engine.
378. 1 Gates stone crusher.
756. 1 Niagara power shear—4½-ft. knife.
835. 1 spur gear wheel, 12 ft. 8-in. diam., 16-in. face with pinion
840. 1-15 ton ice machine; 30 ton refrigerator.
841. 1 hydraulic press
844. 1 locomotive travelling crane, 8 ft. gauge.
635. 1 power rattler.
834. 1 Rogers locomotive.
No. 9 cupola blower.
351. 1 Buffalo blower, No. O, direct connected water motor.
052. 100 steam traps, from 4 to 12-in. diam.
165. 1 8-in. shaft.
028 20 ft. of 5 3-16-in.
029. 80 ft. of 4 1-10-in.
030. 2000 ft. of 1½-in. wire cable.
031. 500 ft. of 2¼-in. cable.
032. 1000 ft. of 2½-in. cable.
033. 1000 ft. of 1¼-in. galvanized guy rope.
594. Fly wheel, solid rim, 10-in. diam., 10-in. bore, rim 9-in. face.
500 000 ft. of standard black wrought iron pipe, from ⅛ to 12-in. diam.
5 carloads of steel sheets, from 8 to 16 gauge
All kinds of plumbing material, including bath tubs, lavatories, sinks and closets.

We carry a complete stock of hardware, including such items as horseshoes, horseshoe nails, hammers, hatchets, axes, handles, &c. Also just received 5 carloads of wire nails.

No. **PUMPS.**

201. Deep well pumps, 6x18, 10x16.
225. Worthington duplex compound, 8x12, 8½x10.
231. Worthington duplex compound, 10x16, 10¼x10.
295. 5 hand power Diafra bilge pumps.
x 1. 4 centrifugal pumps, 16" suction, 12" discharge.
x 2. 24x12x24 Gordon duplex pump.
354. Vertical centrifugal pump, 3-in. discharge.
356. 1 Knowles 7½x7x10 single acting pump.
895. 7½x5x10 single acting pump.
893. Deane single acting 7x6x8 pump, fly wheel type.
888. 1 Smith-Vaile 10x6x12 pump.
928. 1 vacuum pump, 6x10x12.
913. 1 Worthington single action 7x6x8 pump.
890. 1 Norwalk pump, 10x5¾x12.
882. 1 Norwalk pump, 1 x7x16.
881. 1 Crane crank and fly wheel pump.
883. 1 Blake triplex, 8x6x9 pump.
9 0. 1 fire pump, 12x7x10.
934. 1 Worthington single acting 16x7x10 pump.
879. 1 Knowles single acting No. 5 pump, 7x4½x9.
924. 1 Worthington duplex pump, 9x5¼x10.
925. 1 Gordon duplex, 9x5¼x10.

No. **AIR COMPRESSORS.**

337. 1 straight line steam driven air compressor, made by National Drill & Compressor Co., 20x22x24.
890. 1 5¼x7x10 Norwalk air compressor.
896. Hall duplex air compressors, steam driven, 10x12x12, 6x8x8 and 8x10x10.
1 Hall duplex belt driven air compressor, 6x6.
902. 1 Hall duplex air compressor, 7x8x9.

No. **IRON WORKING TOOLS.**

3. 1 screw punch, hand power, 1 inch holes ⅝ to 3-in.
16. 2 circular band saws, 8-in blade.
68. 1 8-in. Fay re-saw.
82. 1 Weatherby, Rugg & Richardson 28-in. surfacer.
92. 1 flexible arm sander.
100. 1 hydraulic tank riveter.
102. 1 Ober automatic wood handle lathe.
199. 1 double chisel mortiser.
239. 2 iron planers, 18x 8x5, 18x18x6.
1 double spindle drill press, Pratt & Whitney.
2. 1 horizontal automatic boring bar, will bore cylinder 24-in.
4. 18x18x4 iron planer.
128. 1 horizontal milling machine.
236. 1 iron planer, 34"x12 ft. long.
256. 1 iron planer, 20x20x4 ft.
037. 12 in. swing, 7 ft. bed turning lathe, hand feed, 4 step cone pulley, 4 in. face.
0131. 18 in. swing, 52 in. bed. Will take 3 ft. between centers; manufactured by American Tool & Machine Co.
0149. 12 in. swing. 6 ft. bed, feed screw, 10 gears, cuts thread from 4 to 36 in.; manufactured by Putnam Machine Co. Rod and feed screw.
0194. 1 speed lathe.
0241. 1 speed lathe, 10 in. swing, 4 ft. bed, 4 step cone pulley.
0242. 1 engine lathe, manf'd by Wheeler & Co., Worcester, Mass.; 14 in. swing, 6 ft. bed, 4 step cone pulley. Cuts thread 2 to 36 in.
0243. Screw cutting engine lathe, 16 in. swing, 6 ft. bed. Woodworking Co., face plate, countershaft and all screw cutting gears.
0244. 12 in. swing, 5 ft. bed, 4 step cone pulley.
0245. 1 wood lathe, 10 in. swing, 6 ft. bed, 2 step cone pulley.
0246. 2 turret lathes, 18 in. swing, 54 in. bed, 6 head turret, with 1¾ in. hollow spindle.
0248. Screw cutting engine lathe, 12 in. swing, 5 ft. bed, back geared, 4 step cone pulley.
0249. 18 in. swing, 8 ft bed, 4 step cone pulley.
0250. Screw cutting engine lathe, 16 in swing, 5 ft. bed.
0251. Iron lathe, back geared, pulley 8x36, 3 ft. bed.
0253. 12 in. swing, 4 ft. bed, screw feed, plain rest.
0254. Special iron lathe, back geared, 8x36, bed 3 ft. long.
0255. Screw cutting engine lathe, 16 in. swing x7 ft. bed, steady rest, 4 step cone pulley; Gleason Mfg. Co. Power cross feed.
0258. Turret lathe, single geared, 6 head and lever, 3 step cone pulley, 16 in. swing, 5 ft. bed.
0259. Back geared turret lathe, 6 head, 4 step cone pulley, 18 in. swing, 5 ft. bed, automatic chains.
026c. Special lathe, back geared, rod and feed screw, 16x7 ft. bed, 4 step cone pulley.
0261. Speed lathe, 10 in. swing x 5 ft. bed.
0263. Special lathe, 6 in. swing, 4 ft. bed.
0264. Special lathe, automatic feed, 4 in. swing, 5 ft. bed, with feed devices and special cutting tools.
0265. Single geared turret lathe, 18 in. swing, 5 ft. bed, with 6 head turret.
0268. Special geared rod lathe; designed for threading and shaping rods size 1 in.
0269. Back geared turret lathe, 16 in. swing, 4 ft. bed, 5 head turret, automatic quick return.
0270. Special lathe, back geared, 4 step cone pulley, 14 in. swing, 5 ft. bed. Special cutting-off tools.
0272. Back geared turret lathe, extra heavy 2½ in. hollow spindle, 6 head turret, automatic chain with rest and cutting-off tool, 18 in. swing x 8 ft. bed.
0274. Special brass working lathe with lever, two driving pulleys, 4 ft. bed.
0272. Special brass working lathe with lever. two driving pulleys, 4 ft. bed.
0306. 1 lathe, 20 in. swing, 7 ft. bed, 40 in between centers, screw feed, auto. cross feed, comp. rest, chain gears.

OUR CATALOGUE No. 239 contains an itemized and complete list of our stock on hand. It is such a book as every up-to-date merchant and mechanic should have in his possession. It is free for the asking.

Five Long Distance Telephones in our Office, all "Yards 827." Telegraphic information by "Western Union" or "Postal" Code.

Chicago House Wrecking Co.

W. 35th and Iron Streets, CHICAGO.

FOR SALE.

We own about **1200** to **1500** tons of

60-lb. STEEL RELAYING RAILS

and Angle Splice Bars for same. Will sell in lots to suit buyer, and subject to Hunt & Co.'s inspection. Well located for Southern delivery.

We also handle new or second-hand light-weight Rails.

ROBINSON & ORR,
419 Wood Street, Pittsburg, Pa.

BARGAINS IN

Second-Hand Machinery

LATHES.

12 & 20' triple-geared pit lathe.
96x14' Wilmarth, triple-geared.
46-64x30 double.
60x20 Wilmarth, triple-geared.
49½x14' Fitchburg, C. R.
37x23' Betts, plain rest.
30x22 Pond, C. R.
23x10 Draper, C. R.
30x22 New Haven, plain rest.
30x10 Draper, C. R.
27x8 Draper, C. R.
26x22 Netts shafting.
26x10 New Haven, C. R.
24x19 Betts, double rest.
24x10 Draper, C. R.
20x16 Putnam, R. & F. rest.
20x10 Harrington, C. R.
20x9 Pond Mach. Tool Co.'s plain rest.
20x8 Putnam, R. & F. rest.
19x11 Lodge & Davis, C. R. and taper.
18x8 Perkins, plain rest.
17x8 P. & W., R. & F. rest.
16x8 Harrington, R. & F. rest.
16x6 Fifield, R. & F.
15x6 Reed, plain rest.
15x6 Prentice Bros., R. & F. rest.
14x8 Fitchburg, plain rest and chuck.
14x6 Fitchburg, R. & F. rest.
13x6 Ames, with turret.
26" Stevens pulley.
22x7 Lodge & Davis turret chucking.
24x8 Gray chucking.

Also good assorted stock of speed and turret lathes.

PLANERS.

61x64x22' Hepworth. 42x42x16 Bement.
27x32x8 Fitchburg. 26x26x6 Gleason.
24x24x8 Pratt & Whitney.
24x24x6 Flather.
22x22x5 Honesdale.
20x20x4 Lathe & Morse.
18x18x4 Gould.
12x8x30" bench on table.

MISCELLANEOUS.

20' hydraulic bending rolls.
8' 6" power bending rolls.
200-lb. Champion belt power hammer.
200-ton hydraulic press.
No. 23 B. & S. plain miller.
28" Smith & Mills shaper.
24" Hendy friction shaper.
2 15" Putnam friction shapers.
Beaman & Smith heavy vert. miller.
Upright drills 20 to 40".
Nos. 0, 1, 2 and 2½ P. & W. screw machines.

Also a large stock of other tools. Send for complete list.

PRENTISS TOOL & SUPPLY COMPANY,
115 Liberty St., New York, N. Y.
Buffalo Office, Block 36, Machinery Hall, Pan-American Exposition.
Boston Office, 200 Franklin St.
Pittsburg Office, 120 First Ave.

Second-Hand Machinery.

3 13x5 Blaisdell lathes, elevating rest.
5 13x6 Blaisdell lathes, elevating rest.
1 14x5 Blaisdell lathe, elevating rest.
1 14x6 Blaisdell lathe, elevating rest.
1 14x6 Ames lathe, elevating rest.
3 14x6 Flather lathes, plain rest.
1 14x8 Putnam lathe.
1 15x6 Prentice lathe, compound rest.
6 15x6 Blaisdell lathes, elevating rest.
1 20x8 Putnam lathe, compound rest.
1 22x9 New Haven lathe, compound rest.
1 30x30x10 Putnam planer.
1 36x36x10 Wilson planer, two heads.
1 36x36x16 Hughes & Phillips.
1 15" Smith & Mills shaper.
1 28" Lodge & Davis shaper.
4 20" Barnes rd. base, power-feed drills.
1 25" Barnes back-geared, power-feed drill.
1 26" Prentice back-geared, power-feed drill.
1 36" Snyder back-geared, power-feed drill, geared revolving table.
1 40" New Haven back-geared, power-feed drill.
1 No. 12 Brown & Sharpe miller.
4 No. 3½ Garvin plain, back-geared millers.
1 No. 15 Garvin plain, back-geared miller.
1 five-foot Niles vertical boring mill, 1 head.
1 Alligator shear, capacity 1⅛ round.

THE S. M. YORK MCHY. CO.
CLEVELAND, OHIO.

FOR SALE.—Engine, 12x16, $200 Three Traction Engines, 10 and 12-horse, $300 each. 10 and 12-horse Portable on wheels, $200 each. Engine Lathe 20" swing, $150. 16" Speed Lathe, Pratt & Whitney, $60. Pratt & Whitney Drill Press, $15. Five Boilers, 56"x18', 20 flues 6", $300 each. Upright Boilers, Engines all sizes. Double Saw Mill, Brownell make, 36' carriage, 3 head blocks, complete, $350. 35 Engines and Boilers, from 6 to 100-horse, at buyers' prices. D. L. CASEY MACHINE CO., Springfield, Ohio.

FOR SALE.—80 horse Hor. Tubular Boiler, 12x 12 and 8"x9" Vertical Engines. 15 horse Portable Engine and Boiler. Single Drum Hoisting Engine and Boiler. 9x30 Hor. Engine. 4 horse Baxter. J. F. DENIHAN, 450 Hamilton Ave., Brooklyn, N. Y.

MACHINERY.

BOILERS—HORIZONTAL.
(Second-hand.)

No. B-97—36"x8', 25 3" tubes. No. B-106—50"x 14', 41 4" tubes. No. B-96½—30"x8', 20 3" tubes. No. B-99—40"x10', 32 3" tubes. No. B-105—48"x 14', 47 3" tubes. No. B-109—54"x15', 64 3" tubes. No. B-112—60"x12', 46 3½" & 2 15" tubes. No. B-116—60"x6', 28 4½" tubes (5). No. B-125—72"x5½', 61 4" tubes. No. B-102—60"x12', 70 3½" tubes. No. B-100—44"x10', 38 3" tubes. No. B-113—60"x15', 52 4" tubes. No. B-114—60"x16', 54 4" tubes. No. B-104—48"x12', 54 3" tubes. No B-98—40"x10', 32 3" tubes. No. B-96—54"x12', 71 3" tubes. No. B-99½—40"x10' 4", 34 3" tubes.

BOILERS—VERTICAL.
(Second-hand.)

No. B-157—42"x96", 109 2" tubes, submerged. No. B-148—30"x5', 42 2"x36" tubes. No. B-84—36"x8', 68 2"x5' 8" tubes. No. B-149—28"x5', 37 2" x2' 11" tubes. No. B-162—28"x5'. 37 2"x37" tubes. No. B-151—30"x6', 55 2"x2' 3" tubes, submerged. No. B-150—30"x8o", 50 2"x38" tubes, submerged. No. B-160—30"x6' 6", 37 2"x4 6" tubes.

(New.)

No. B-144—24"x6', 24 2"x49" tubes.

PORTABLE BOILERS.
(Second-hand.)

No. B-131—15 H. P., 24 3"x6' tubes. No. B-133—18 H. P., 28 3"x5' tubes. All second-hand, in good working order.

ENGINES—HORIZONTAL.
(Second-hand.)

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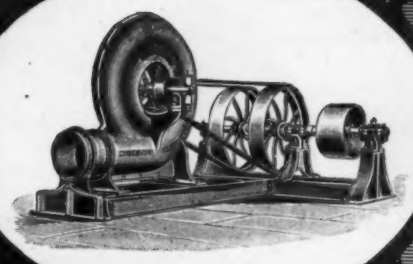

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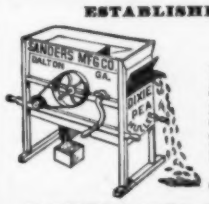

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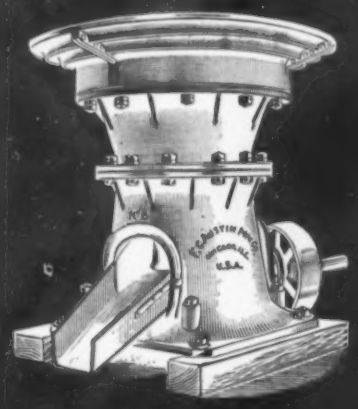

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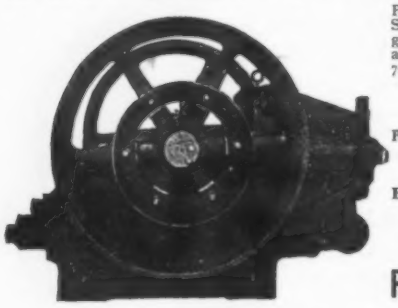

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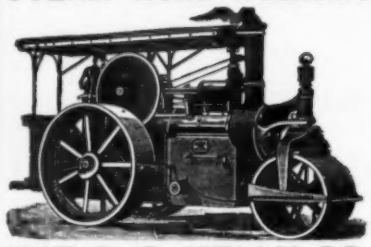

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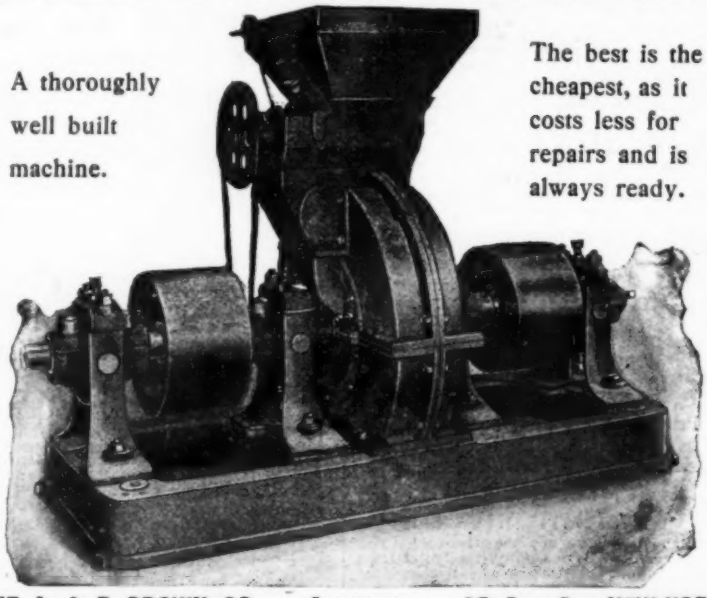

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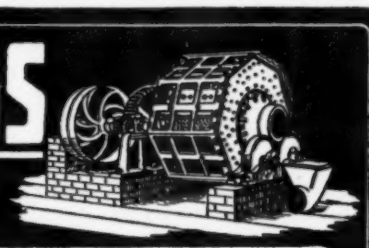

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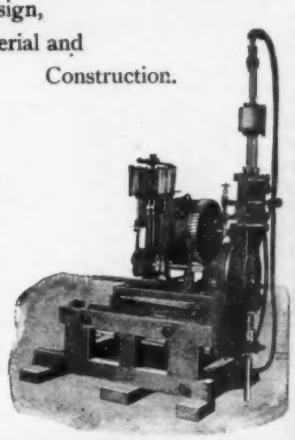

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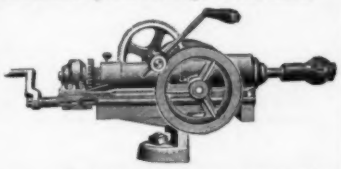

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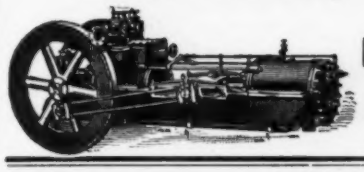

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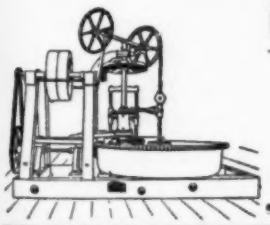

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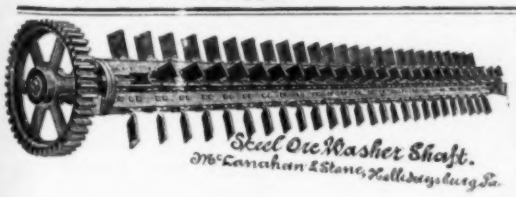

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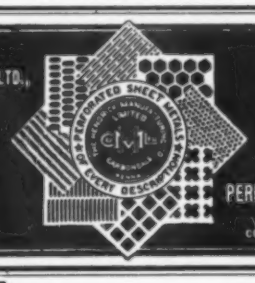

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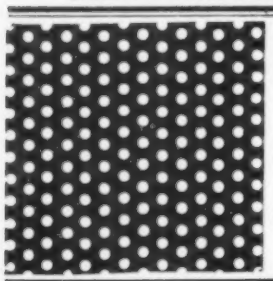

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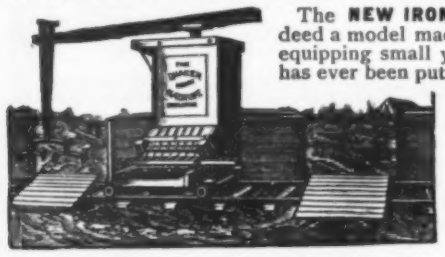

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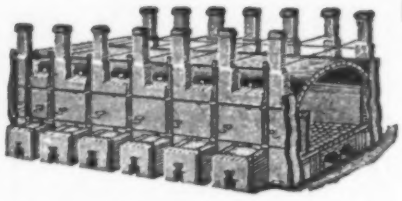

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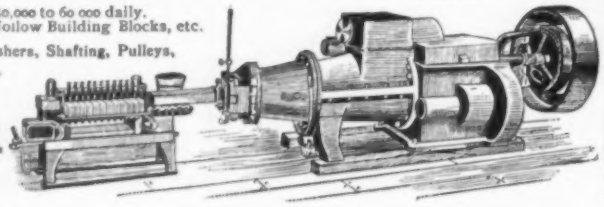

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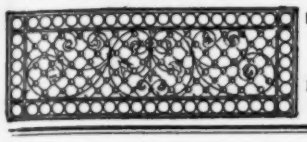

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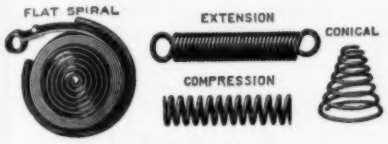

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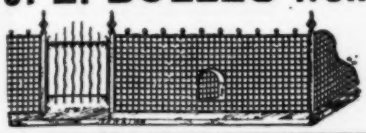

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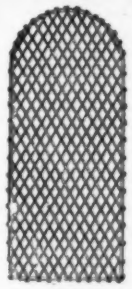

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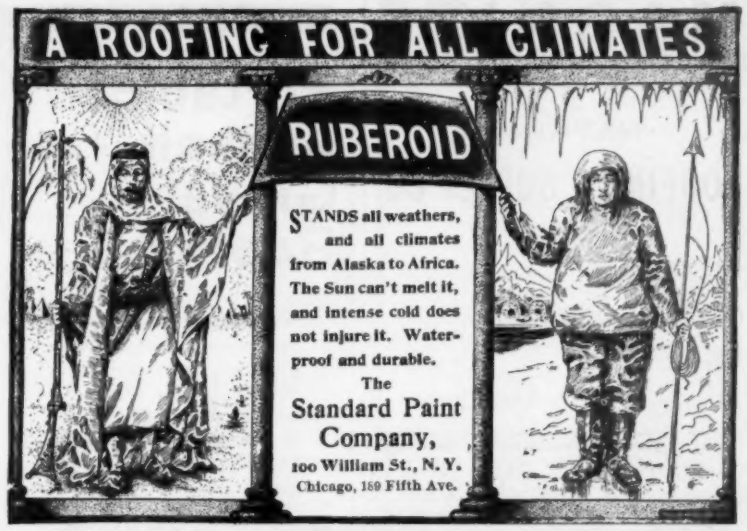

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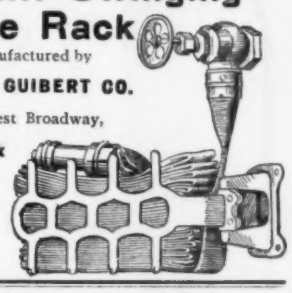

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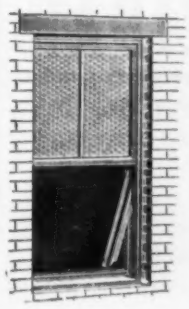

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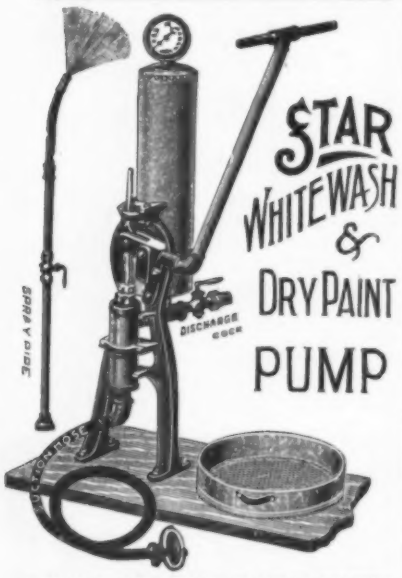

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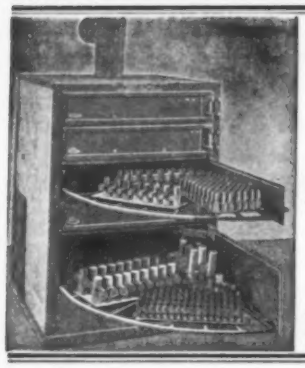

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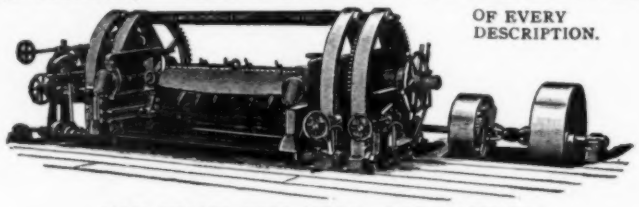

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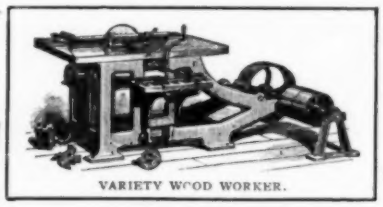

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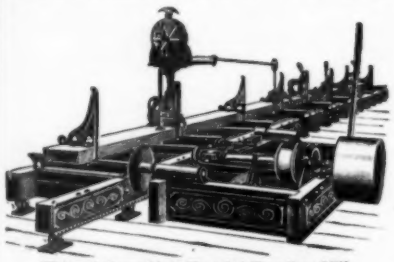

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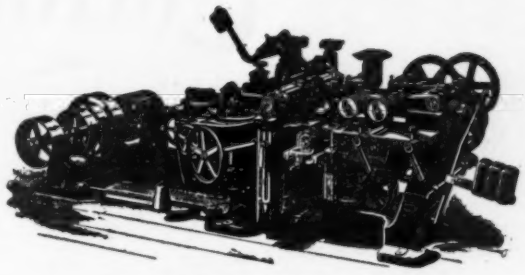

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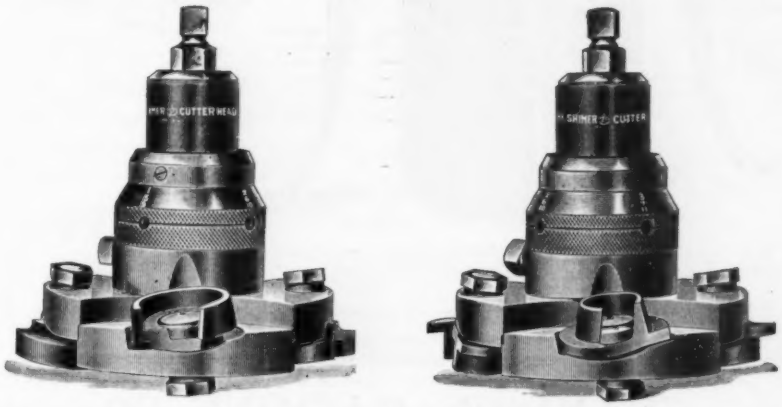

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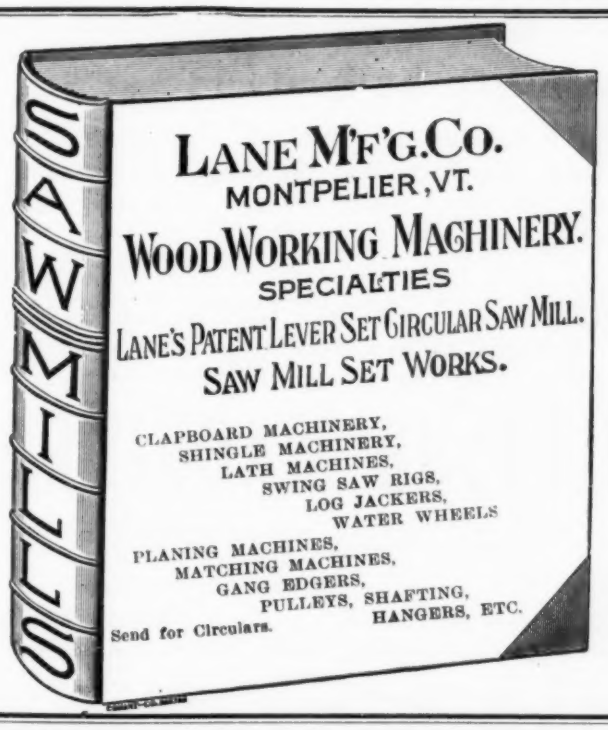

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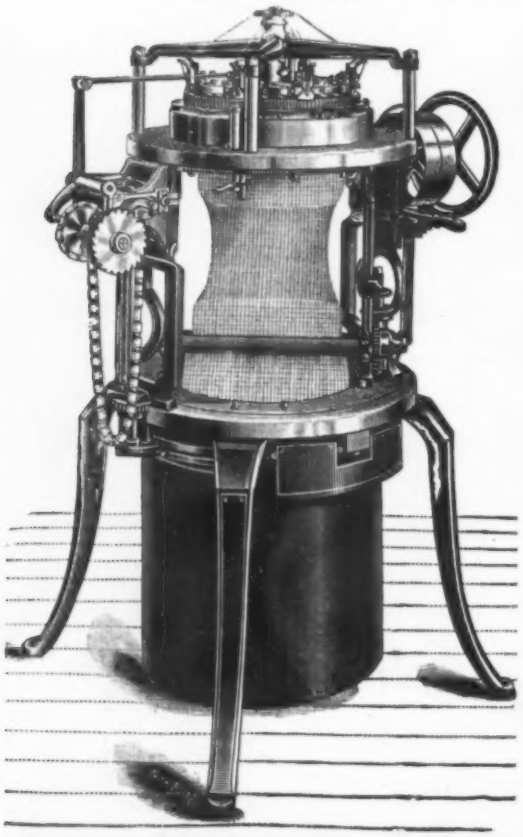

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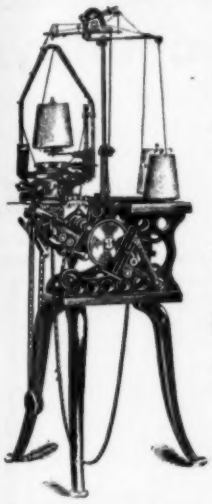

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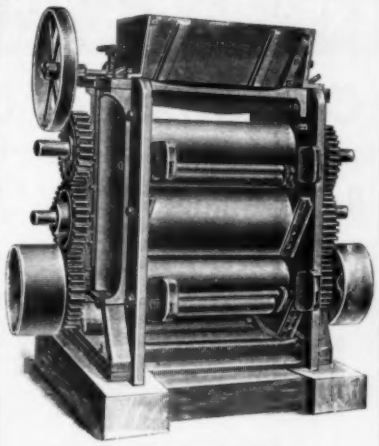

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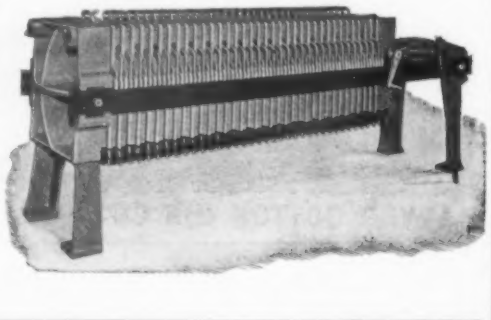

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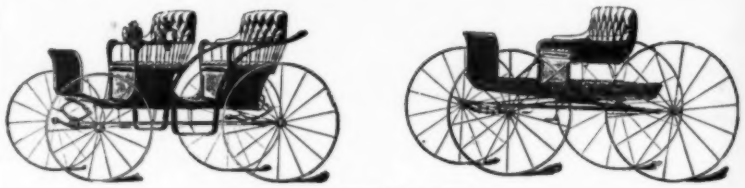

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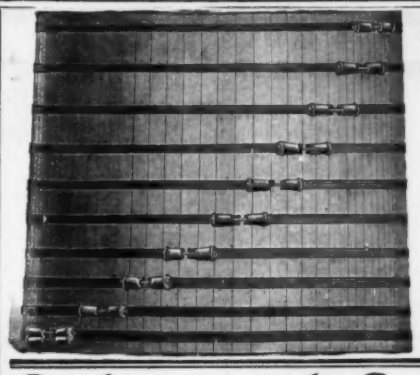

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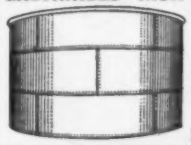

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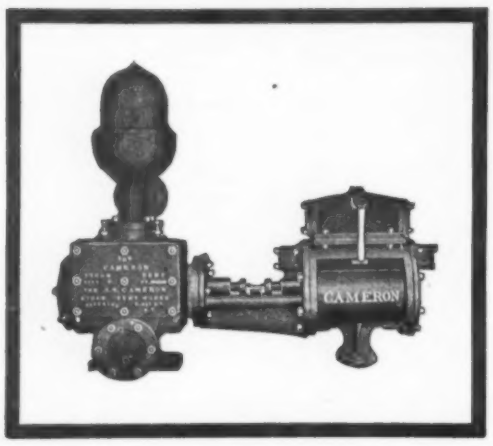

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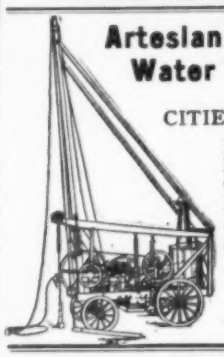

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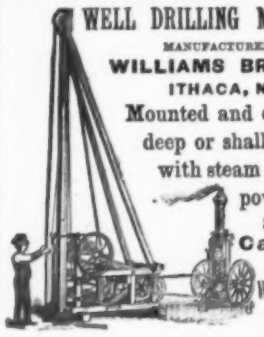

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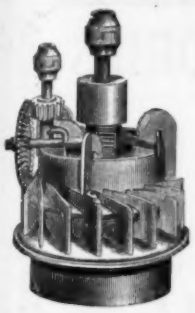

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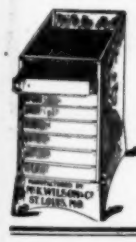

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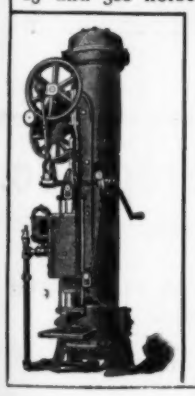

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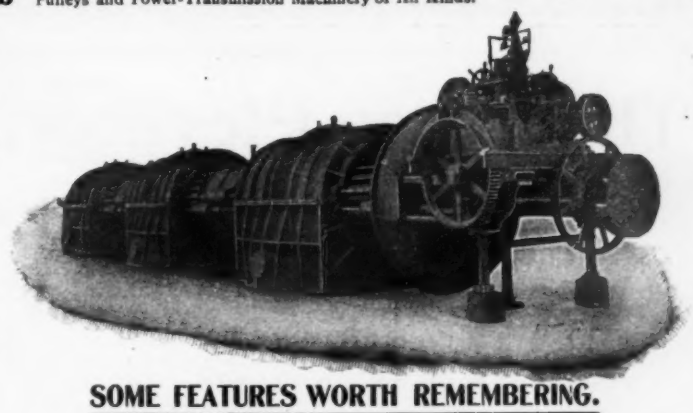

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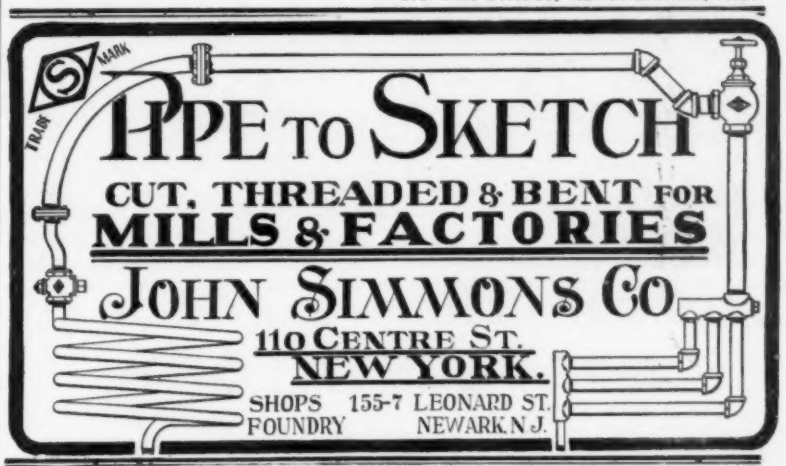

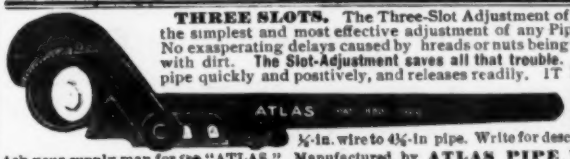

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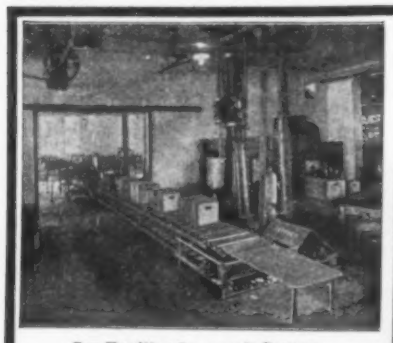
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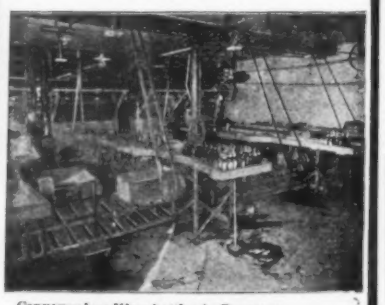
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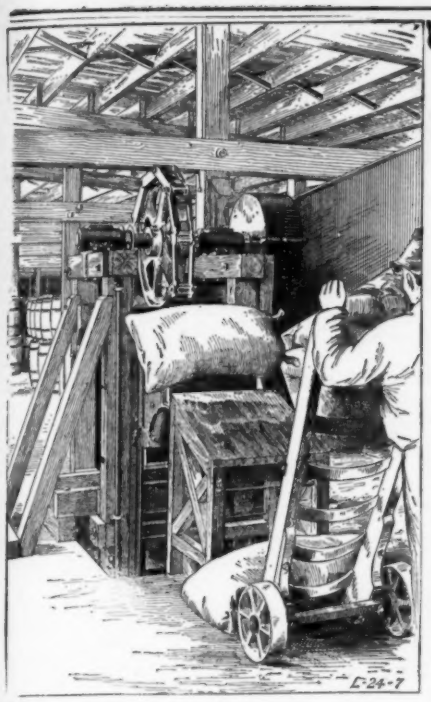

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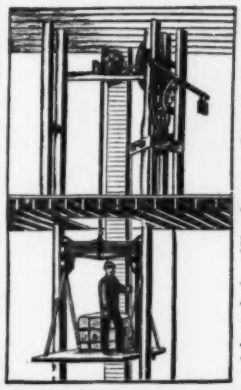

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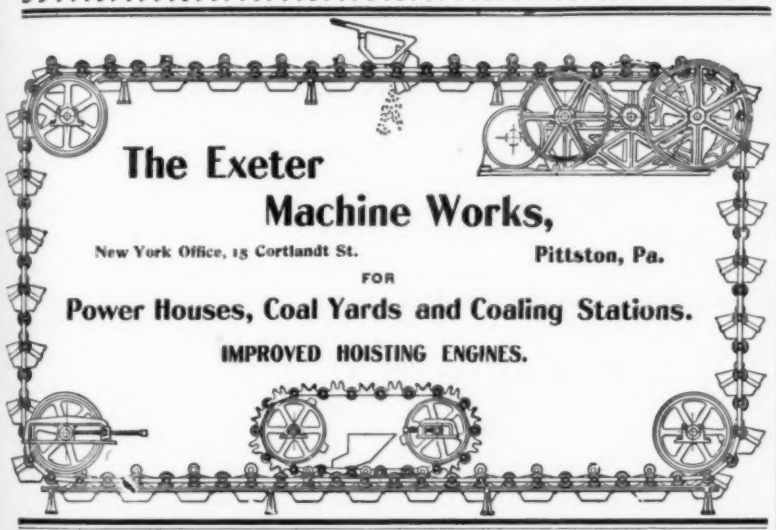

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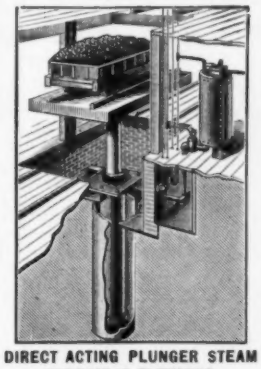

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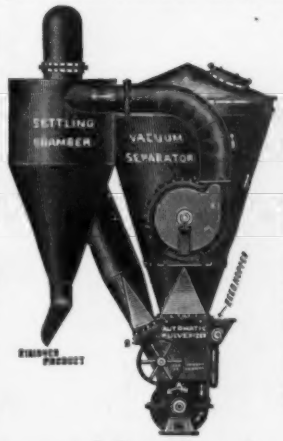

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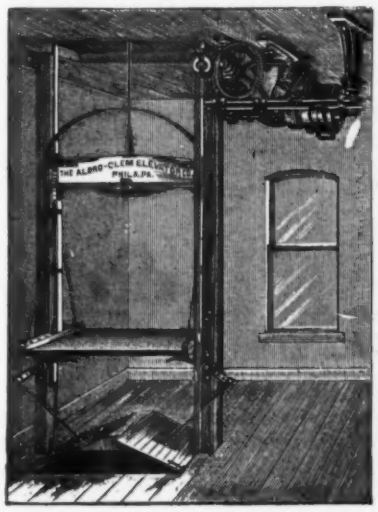

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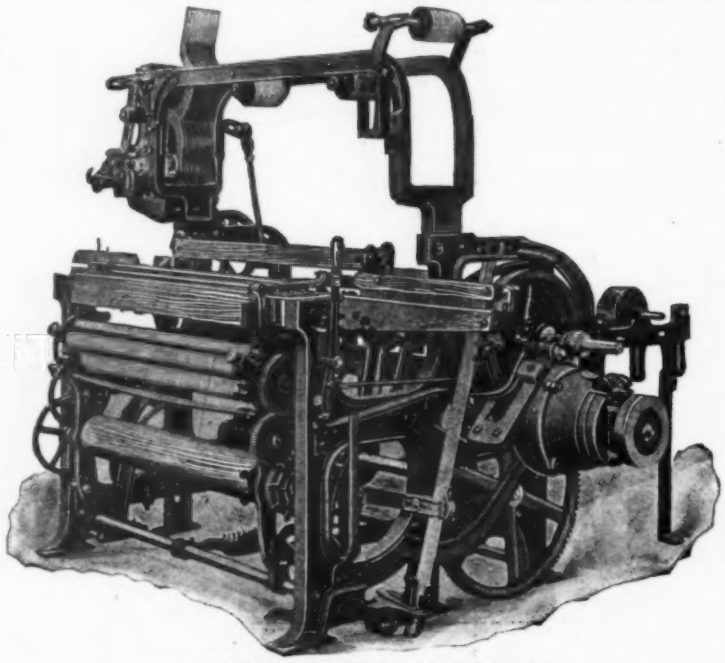

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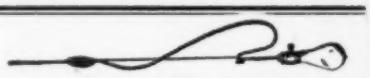

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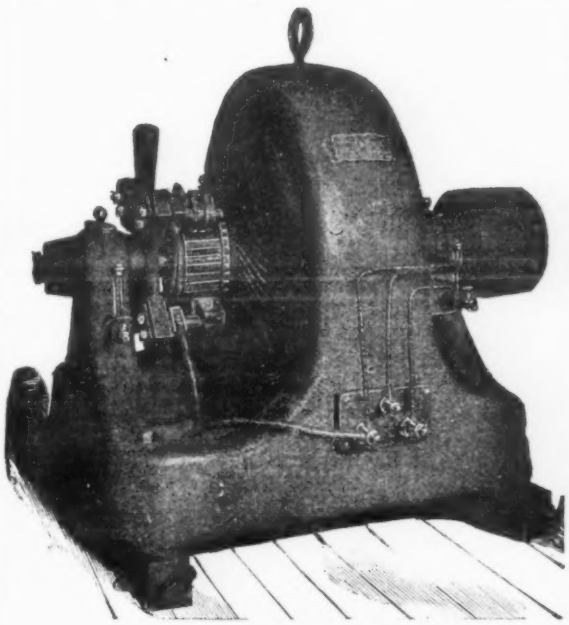

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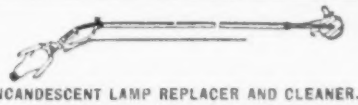

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